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GEORGE *R.*

GEORGE *by the Grace of God, King of* Great Britain, France *and* Ireland, *Defender of the Faith,* &c. *To all to whom theſe Preſents ſhall come, Greeting. Whereas* James Leoni *of Our City of* London, *Gent. hath humbly repreſented unto Us, That he hath with great Labour and Expence Publiſhed a Work, Entituled, (The Architecture of* Andrea Palladio, *in Four Books, Printed in* Engliſh, Italian *and* French, *containing a ſhort Treatiſe of the Five Orders, and the moſt neceſſary Obſervations concerning all Sorts of Buildings; as alſo the different Conſtruction of Private and Publick Houſes, Highways, Bridges, Market-Places, Xyſtes and Temples, with their Plans, Sections and Uprights, tranſlated from the* Italian *Original, in Five Volumes in Folio) and hath therefore humbly beſought Us to grant him Our Royal Privilege and Licence for the ſole Printing and Publiſhing thereof for the Term of Fourteen Years; We being willing to give all due Encouragement to Works of this Nature, are graciouſly pleas'd to condeſcend to his Requeſt; and We do therefore by theſe Preſents, ſo far as may be agreeable to the Statute in that behalf made and provided, grant unto him the ſaid* James Leoni, *his Executors, Adminiſtrators and Aſſigns, Our Licence for the ſole Printing and Publiſhing the ſaid Work of* Andrea Palladio, *for the Term of Fourteen Years, to be computed from the Date hereof, ſtrictly forbidding all Our Subjects within Our Kingdoms and Dominions, to reprint or abridge the ſame, either in the like or in any other Volume or Volumes whatſoever, or to import, buy, vend, utter or diſtribute any Copies thereof reprinted beyond the Seas, during the aforeſaid Term of Fourteen Years, without the Conſent or Approbation of the ſaid* James Leoni, *his Heirs, Executors and Aſſigns, under their Hands and Seals firſt had and obtained, as they will anſwer the contrary at their Perils; whereof the Commiſſioners and other Officers of Our Cuſtoms, the Maſter, Wardens and Company of* Stationers *are to take Notice, that due Obedience be rendered to Our Pleaſure herein declared. Given at our Court at St.* James's *the Fifteenth Day of* January 17^{19}_{20}, *in the Sixth Year of Our Reign.*

By His Majeſty's Command,

J. Craggs.

ANDREAS PALLADIVS VICENTINVS.

AND. PALLAD

THE
ARCHITECTURE
OF
A. PALLADIO;
IN FOUR BOOKS.

CONTAINING

A ſhort TREATISE of the FIVE ORDERS, and the moſt neceſſary Obſervations concerning all Sorts of BUILDING;

AS ALSO

The different Conſtruction of PRIVATE and PUBLICK HOUSES, HIGH-WAYS, BRIDGES, MARKET-PLACES, XYSTES, and TEMPLES, with their Plans, Sections, and Uprights.

Reviſ'd, Deſign'd, and Publiſh'd

By GIACOMO LEONI, *a* Venetian; *Architect to His moſt* SERENE HIGHNESS, *the Late*

ELECTOR PALATINE.

Tranſlated from the Italian *Original.*

In TWO VOLUMES.

The SECOND EDITION.

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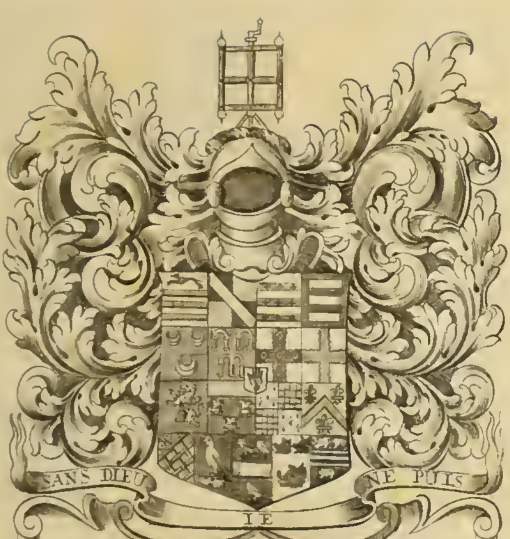

Sr. Fulwar Skipwith of Newbold Hall
in the County of Warwick Baronet
1704

454506

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Z.

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ERRATA.

Vol. I.

Page 3. Line laſt but one dele *makes.* p. 17. l. 3. read *ſuperficies.* l. 21. read *made.* p. 23. l. 31. read *Pedeſtal.* p. 27. l. 5. read *high.* p. 39. l. 16. read *Planks.* p. 42. l. 3. for *one third*, read *two thirds. Pallad.* p. 60. laſt line but one, inſtead of *Udena*, read *Udene.* p. 70. l. 1. add, *which were great Halls or Sallons for Feaſting and other Recreations, &c.* p. 74. l. 4. read *Virtuous.* l. 25. read *and.*

Vol. II.

Page 3. Line 4. read *Paleſtras.* p. 10. l. 17. read *Milliary.* p. 27. l. 20. read *delle.* p. 33. l. 13. read *part. Ibid.* laſt Line in the References, the laſt *B* ſhou'd be *C.* p. 42. l. 16. read *Churches.* p. 57. l. 10. read *little.* p. 62. l. 4. from bottom, read *which.* p. 65. l. 9. read *which.* p. 70. l. 1. add, of the Church of *St. George the Great* at *Venice*, whoſe length, *&c.*

THE

THE PREFACE TO THE READER.

A*FTER five Years continual Labour, I have at laſt happily finiſh'd the Edition which I undertook of* Palladio's *Architecture. As for what concerns the Printing, there has been no Book hitherto more beautifully printed in* England: *I having reſolv'd from the beginning to ſpare no Expence, that I might rather ſurpaſs the Expectation of my Subſcribers, than come any way ſhort of it. This will more evidently appear by the great number of Copper Plates and Deſigns, which I have added over and above what I promis'd. Such as are true Judges will, by comparing the Draughts of* Palladio *with mine, eaſily diſcern a vaſt difference. His Wooden Cuts I have chang'd into Copper Plates, which, for the greater Perfection of the Work, tho much to my own Loſs, I have procur'd to be engrav'd in* Holland *by the famous Monſieur* Picart, *one of the beſt Maſters of that Art in* Europe. *I have not only made all the Draughts my ſelf, and on a much larger Scale than my Author; but alſo made ſo many neceſſary Corrections with reſpect to Shading, Dimenſions, Ornaments,* &c. *that this Work may in ſome ſort be rather conſider'd as an Original, than an Improvement. In the mean time I offer my Service, either in Perſon or otherwiſe, to ſuch of my Subſcribers and others, as may have occaſion for me in the way of my Profeſſion; as I lay hold of this opportunity to return my Thanks to them for their readineſs in forwarding my Undertaking, by ſubſcribing towards it: And I hope they will continue to honour me with the like Encouragement in favour of another Work, voluminous indeed, but moſt uſeful and curious, as by the printed* Propoſals *will appear.*

JAMES LEONI.

ANDREA PALLADIO (one of the moſt Learned Architects that *Italy* has produc'd, ſince the polite Arts begun to revive there) was born in *Vicenza*, a Town belonging to the Republick of *Venice*. His Parents were of mean Extraction, but in conſideration of his great Abilities, and as a reward for the honour he did his Native City, he was made free of the ſame, and receiv'd into the Body of the Nobility. He had for his Maſter the Celebrated *Giovanni Giorgio Triſſino*, under whom he not only learnt the moſt curious parts of Civil and Military *Architecture*, but likewiſe adorn'd his Mind with all ſorts of Erudition. He made it his chief Study to ſearch into the ſtately Monuments of old *Rome*, which he examin'd with unparallel'd Diligence and Attention. His Poſthumous Work of the *Roman Antiquities*, tho imperfect, does yet ſufficiently ſhow how much he made himſelf Maſter of the Nobleſt Ideas of the Antients: for walking through the rubbiſh and other remains of theſe, he diſcover'd the true Rules of an Art, which till his time were unknown; even to *Michel-Angelo* and *Brunelleſchi* his Contemporaries. The Exactneſs of his Deſigns can't be too much commended: 'tis pity that the Authors, who have made mention of him, are ſilent on the particulars of his Life. They have taken great pains in giving us a long Liſt of the fine Buildings wherewith he adorn'd his Country, but to little purpoſe; ſince we have them drawn and explain'd by himſelf, in the ſecond and third Books of his *Architecture*. He flouriſh'd in the 16th Century, and dy'd in the Year 1580.

THE
PREFACE
TO THE
READER.

MY natural Inclination leading me, from my very Infancy, to the Study of *Architecture*, I reſolv'd to apply my ſelf to it: And becauſe I ever was of Opinion, that the antient *Romans* did far excel all that have come after them, as in many other things ſo particularly in Building, I propoſed to my ſelf *Vitruvius* both as my Maſter and Guide, he being the only antient Author that remains extant on this Subject. Then, I betook my ſelf to the Search and Examination of ſuch Ruins of antient Structures as, in ſpight of Time and the rude Hands of *Barbarians*, are ſtill remaining; and finding that they deſerved a much more diligent Obſervation than I thought at firſt Sight, I began with the utmoſt Accuracy to meaſure every the minuteſt part by it ſelf: And indeed, I became ſo ſcrupulous an Examiner of them (not diſcovering that any thing, of this kind, was perform'd, without the juſteſt Reaſon and the fineſt Proportion) that I afterwards, not once only, but very often, took Journies to ſeveral parts of *Italy*, and even out of it, that I might be able, from ſuch Fragments, to comprehend what the whole muſt needs have been, and to make Draughts accordingly. Whereupon, conſidering how widely different the way of Building, commonly in uſe, is from the Obſervations I made on the ſaid Edifices, and from what I have read in *Vitruvius*, in *Leo Baptiſta Alberti*, and other excellent Writers ſince *Vitruvius*'s Time, as well as from Buildings of my own Performance, which raiſed my Reputation, and gave no ſmall Satisfaction to thoſe who were pleaſed to employ me, I thought it an Undertaking

dertaking worthy of a Man who conſiders that he was not born for himſelf only, but likewiſe for the good of others, to publiſh to the World the Deſigns (or Draughts) of thoſe Edifices, which with equal Expence of Time and Danger of my Perſon, I have collected; and briefly to ſet down what ſeem'd to me moſt worthy to be conſider'd in them; and further, to give thoſe Rules which I have hitherto follow'd in Building, and which I ſtill follow, to the end that they who ſhall read my Books, may be able to practiſe whatever they find uſeful in them, and to ſupply what is wanting, as many ſuch things there may be. Thus Men, by degrees, will learn to lay aſide the ſtrange Abuſes, the barbarous Inventions, the ſuperfluous Expences, and (what imports them more than all the reſt) to avoid the various and continual Ruins which have happened in ſeveral Buildings. I have moreover apply'd my ſelf to this Undertaking with the greater Alacrity, becauſe at this time I ſee abundance of others become ſtudious of this Profeſſion, many of whom are worthily and honourably mentioned in the Books of that rare Painter and Architect, *George Vaſari Aretino*; which makes me hope that the way of Building will be reduced to general Utility, and very ſoon arrive to that pitch of Perfection, which, in all Arts, is ſo much deſired. We appear to come very near it, in this part of *Italy*, ſeeing that not only in *Venice* (where all the Polite Arts do flouriſh, and which City alone affords an Example of the Grandeur and Magnificence of the *Romans*) there begin to appear Fabricks of good Taſte, ſince that moſt celebrated Carver and Architect, *Giacomo Sanſovino*, firſt introduced the true manner, as may be ſeen, not to mention his fine Performances in the new Palace of *Procuracy*, which is perhaps the moſt ſumptuous and the moſt beautiful Edifice that has been erected ſince the time of the Antients; but alſo in ſeveral other Places of leſs renown, and particularly in the City of *Vicenza*, which tho of no great Extent, yet is full of very refined Genius's, and ſufficiently abounds in Riches. There I had firſt occaſion to put that in practice which I now publiſh for the common Good. As here may be ſeen divers fine Edifices, and many Gentlemen who are moſt ſtudious of this Art, and who, whether their Blood or their Learning be conſider'd, are not unworthy to be number'd among the moſt Illuſtrious, ſuch as *John George Triſſino*, the Ornament of our Age; the Counts *Marc Antony* and *Adrian de Thieni*, Brothers; *Antenor Pagello*, and many others; who having paſt to another Life, have eternized their Memory by the curious and rich Buildings they have left behind them. There are now living in the ſame City *Fabio Monza*, a knowing Perſon in many Subjects; *Elio de*

Belli, the Son of *Valerio*, famous for Painting in Brooch * and Cutting of Cryſtal; *Antony Francis Oliviera*, who beſides the Knowledge of many Sciences, is an excellent Architect and Poet, as he has demonſtrated in his Heroick Poem, Entitled *Alemana*, and by the Houſe that he built at *Boſchi di Nanto*, a place of the *Vicentin*; and finally, to paſs over ſeveral others that might reaſonably lay a claim to the ſame Rank, *Valerio Barbarano*, a moſt diligent Obſerver of whatever any ways belongs to our Profeſſion. But to return to our Subject, having deſigned to publiſh to the World the Fruits of thoſe Labours, which, with the greateſt Diligence from my Youth upwards, I have been collecting; as alſo the Searching and Meaſuring of thoſe Antient Buildings that any ways came to my Knowledge; and upon this occaſion briefly to treat of Architecture in the moſt orderly and diſtinct method poſſible; I thought it moſt convenient to begin with the Houſes of private Perſons, as thinking it reaſonable to believe, that theſe in time gave riſe to publick Edifices, it being very probable that Men lived firſt aſunder by themſelves; and perceiving afterwards that they needed the Aid of others to make them happy, (if indeed there be any Happineſs here) they naturally loved and deſired the Company of other Men, whence, out of many Houſes they made Villages, and out of many Villages Cities, in which they built publick Places and Edifices. Beſides, as of all the Parts of Architecture, none is more neceſſary than this for Mankind, nor any more frequently practiſed by them, I ſhall therefore in the firſt place treat of private Houſes, and next of publick Edifices. I ſhall briefly write of Streets, Bridges, publick Places, Priſons, *Baſiliche*, or Courts of Juſtice; *Xiſti* and *Paleſtre* (which were Places deſign'd for bodily Exerciſes) of Temples, Theatres and Amphitheatres, of Arches, of publick Baths, of Aqueducts, and laſt of all, the manner of fortifying Cities and Havens. In all theſe I ſhall avoid ſuperfluity of Words, and will barely remark ſuch things as ſhall appear to me moſt neceſſary, uſing thoſe Terms and Names that are in common uſe with our preſent Architects. And becauſe I dare make no other boaſts of my ſelf than what flow merely from the long and earneſt Study, great Diligence, ſtrong Paſſion and Affection wherewith I have purſued the Knowledge and Practice of what I now offer to the World; if it pleaſes *God* that I have not *laboured in vain*, I ſhall be thankful to his Goodneſs for it with all my Heart; acknowledging my ſelf obliged to thoſe, who, from their fine Inventions and Experiments, have left us the Precepts of this Art; ſince thereby they have opened a more eaſy and expeditious way to the making of new Diſcoveries, and that by their means (which we ought thankfully to acknowledge) we are come to the Knowledge of many things, which otherwiſe had perhaps remain'd ſtill unknown. This firſt part ſhall be divided into two Books; the firſt will contain the Preparation of the Materials, and being prepared, how, and in what form, to employ them from the Foundations up to the Roof; and here likewiſe will be contained thoſe general Rules which are to be obſerved in all Edifices, as well publick as private. In the ſecond I ſhall treat of the different Qualities of Buildings, ſo as to make them agreeable to Perſons of different Conditions: Firſt of Houſes in the City, and next of the moſt convenient Situations for Country-houſes, and how they ought to be moſt commodiouſly diſpoſed. But ſince in this Kind, we have but very few antient Originals, by which to be governed, I ſhall lay before you the Plans of ſeveral Houſes I have built for Gentlemen in divers places; and laſtly, the Antients Deſigns of Country-houſes, with thoſe parts in them that were moſt remarkable, in the manner that *Vitruvius* has taught us, and that they themſelves built them.

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* *Pictures in one Colour are ſo call'd.*

THE FIRST BOOK.

CHAP. I.

Of Things to be conſider'd and provided, before one begins to Build.

THE firſt thing that requires our conſideration, when we are about Building, is the Plan, and the Upright of the Edifice we propoſe to erect. Three things, according to *Vitruvius*, are chiefly to be conſider'd, without which a Building cannot be of any value. Theſe are *Conveniency*, *Solidity*, and *Beauty*. For no Edifice can be allow'd to be perfect, if it be commodious and not durable; or, if being durable, it be ſubject to many inconveniencies; or, if having both ſolidity and conveniency, it has no beauty nor uniformity.

An Edifice may be reckon'd Commodious, when every part of it has its proper place and ſituation, in reſpect to its dignity and uſes; having neither more nor leſs than theſe require: as when the Halls, Rooms, Cloſets, Galleries, Cellars, Garrets, *&c.* are fitly diſpos'd, and in their proper places. The Solidity of an Edifice depends upon the care of erecting the Walls very *plum*, and thicker below than above, with good and ſtout Foundations: taking care that the *pillars* above be exactly perpendicular over the *pillars* below, and that all the openings, as Doors and Windows, be one above the other, ſo that the ſolid be upon the ſolid, and the void upon the void. As for the beauty of an Edifice, it conſiſts in an exact Proportion of the parts within themſelves, and of each part with the whole: for a fine Building ought to appear as an entire and perfect body, wherein every member agrees with its fellow, and each ſo well with the whole, that it may ſeem abſolutely neceſſary to the being of the ſame.

Theſe things conſider'd upon the Draught, or Model, the Charges of the whole are to be diligently computed, and all requiſite

quiſite materials timely provided, that nothing be deficient, or hinder the finiſhing of the work; it being no little ſatisfaction and praiſe to the Builder, nor a ſmall advantage to the work it ſelf, if it is compleated with due expedition, and in all its parts together: becauſe, if all the Walls are rais'd at the ſame time, they will ſettle equally every where, and there will be none of thoſe Chinks or Clefts, which are ſo common in the buildings finiſh'd at ſeveral times. Therefore having made choice of the moſt skilful Artiſts that can be had (to the end, that, by their advice, the Work may be better carried on) Bricks, Stones, Lime, Sand, Timber, and Metals, are to be provided in a ſufficient quantity; concerning which proviſion, I intend to lay down ſome very uſeful Obſervations: as for example; for framing the Floors of the Halls and Chambers, ſo many Joyſts are to be provided for, as when fram'd, there may remain between them the ſpace of a Joyſt and a half. Likewiſe concerning Stones, notice ought to be taken, that the *Jambs* of the Doors and Windows are not to be bigger than a fifth, and not leſs than a ſixth part of the opening. And if the building is to be inriched with *Columns*, or *Pilaſters*, the *Baſes*, *Capitels*, and *Entablature*, may be made of Stone, and the reſt of Bricks. As for the Walls, they ought to diminiſh according as they riſe. Theſe Conſiderations rightly apply'd, will help to leſſen the Expences of the work. But becauſe I am to diſcourſe about all theſe things in particular, 'twill be ſufficient to have given here this general hint as a rough draught of the whole Building. And as the quality and goodneſs of the materials, are as much to be inquir'd into, as the quantity of them, the experience of thoſe who have built before, will be a great help to determine what is fit and expedient to be done. And tho *Vitruvius*, *Leo Baptiſta Alberti*, and other excellent Maſters, have given us their opinions of the choice of Materials; yet that nothing be wanting in this Book, I ſhall ſubjoin my own Obſervations to the moſt neceſſary of theirs.

CHAP. II.

Of TIMBER.

Timber, according to *Vitruvius* (Book 2. Chap. 9.) ought to be cut down in autumn, and during the winter; becauſe the Strength, which, in the ſpring and ſummer, was diſpers'd through the leaves and fruits of the trees, is then gather'd into the trunk and boughs: and if it is fell'd in the wane of the Moon, then it is free from a certain moiſture which is apt to breed worms, and to rot the wood. Timber ſhould be cut at firſt only to the pith, and ſo left until it be dry, that the rotting moiſture we have ſpoken of, may the eaſier drop down and paſs away. Being cut, it muſt be laid under ſhelter from Sun and Rain, chiefly that ſort of wood which grows of it ſelf, that is, without being ſow'd or planted, for fear it ſhould chop: and in order to make it grow dry equally, it will be very proper to daub it over with Cow-dung. It ſhould not be drawn home through the Dew, but rather in the afternoon; neither ought it to be wrought, if it is wet or too dry, becauſe it would make it warp and occaſion clumſy work: nor will it in leſs than three Years be dry enough to uſe it in Planks, Doors, and Window Frames. 'Tis expedient for thoſe who undertake a building, if they want skill in this, to inform themſelves from men who are throughly acquainted with the nature of Timber, that they may judge which is fit for ſuch or ſuch uſes, and which not. *Vitruvius*, in the above quoted Chapter, gives good inſtructions on that head; beſides many more, who have written at large on the ſame Subject.

CHAP. III.

Of STONES.

THERE are two ſorts of Stones, natural and artificial. The natural are dug out of the Quarry, and either fit to make Lime (of which we ſhall ſpeak more at large hereafter) or to be employ'd in making the Walls of Buildings; and of theſe laſt there are ſeveral ſorts. Some extreamly hard, as Marble, and ſuch other living Stones, as they are call'd: ſome leſs hard, as Free-ſtone: others ſoft, as Chalk. Marble and Free-ſtone may be wrought as ſoon as dug, for they will be then more *eaſy* to work, ſince the longer they are out of the Quarry they become the harder. But as to ſofter Stone, it ought to be dug in ſummer, be expos'd to the Air, and not to be uſed within two Years; eſpecially when the nature of the Stone is not well known, as when 'tis dug in a place from whence none has been yet taken: for being expos'd to Wind, Rain, and Froſt, makes it grow hard by degrees, and more capable to bear the Weather. Another reaſon why it ſhould be left ſo long is, that thoſe which are damag'd may be laid aſide, to be uſed in Foundations, and other places not expos'd to ſight; and that the others which are well ſeaſon'd may be employ'd in the outſide work, becauſe then we may be ſure, that after ſuch a trial, they will laſt long.

Artificial Stones, which from their form are commonly call'd *Quadrels*, alias *Bricks*, are made of a chalky, whitiſh, and ſoft Earth, without any mixture of Clay or Sand, which is to be carefully ſeparated. The Earth is to be dug in autumn, and temper'd in winter, that the Bricks may be moulded in the ſpring: But if neceſſity forces to make them in winter or ſummer, they muſt be cover'd in winter with dry Sand, and in ſummer with Straw. When made, they require a long time to dry, and 'tis beſt to dry them under ſhelter, that both the middle and the out-ſide may be equally hardned, which can't be done in leſs than two years. They may be made bigger or ſmaller, according to the nature and quality of the Building, and the uſe to which they are deſign'd. The Antients made their Bricks for publick and great Buildings, larger than thoſe for ſmall and private ones. The bigger ſort ought to have ſome holes left here and there, that they may dry and burn the better.

CHAP. IV.

Of SAND.

THREE ſorts of Sand are commonly uſed in Buildings; Pit-Sand, River-Sand, and Sea-Sand. Pit-Sand is the beſt of all, and is either black, white, red, or cindry; which laſt is a ſort of Earth burnt by Fire inclos'd in the Mountains, and very common in *Tuſcany*. There is alſo in *Terra di Lavoro*, in the Territories of *Baiæ* and *Cumæ*, a Sand by *Vitruvius* call'd *Puteolana*, which knits together very ſoon in Water, and makes Mortar exceeding ſtrong. It has been found by long experience, that of all Pit-Sand, the white is the worſt; and of River-Sand, that which is in the rapid ſtreams, and under falls of water, is the beſt, becauſe it is the cleaneſt. The Sea-Sand is the worſt of all; however it ought to be blackiſh and to ſhine like Glaſs: the biggeſt and neareſt the ſhore is the beſt. Pit-Sand being the fatteſt makes the ſtrongeſt Mortar, and is therefore to be uſed in Walls and long Vaults, but 'tis apt to crack. River-Sand is very good, for *rendring* and *rough-caſting* of Walls. But the Sea-Sand, being ſoon wet and ſoon dry, and apt to melt away by reaſon of its Salt, is unfit to bear any weight. The beſt Sand in its kind of any of theſe ſorts, is that which being handl'd and ſqueez'd between one's Fingers, crackles or makes a noiſe; or, if being put upon a white cloth, it neither ſtains nor dirties it. That which mingled with Water makes it ſlymy and muddy, is very bad: as alſo that which has for a long time been expos'd to the Air, Sun, Moon or Froſt; becauſe it gathers much earth and rotten humour, apt to bring forth ſhrubs and other wild plants, which are very prejudicial to Buildings.

CHAP. V.

Of LIME, *and how to work it.*

LIME-Stones are either dug out of Hills, or taken out of Rivers. Thoſe of the Hills are good, if they are dry, free from any moiſture, and naturally brittle; having no mixture of any thing in them, which after paſſing the Fire, might make the Stone leſs. The beſt Lime therefore is made of the hardeſt, heavieſt and whiteſt Stones; and which, being burnt, remain about a third part lighter than before. There is alſo a ſort of ſpungy Stone, which makes very good Lime, for *rendring* of Walls. In the Hills of *Padua*, they dig a certain rugged and ſcaly Stone, whoſe Lime is very good for works expos'd to the Weather, or in the Water, becauſe it hardens immediately, and laſts a long time. All dug Stones are better to make Lime, than the gather'd ones; and rather thoſe that come from a ſhady and moiſt Pit, than from a dry one; and the white better than the brown. Pebbles, eſpecially white ones, that are gather'd in Rivers and rapid Streams, make excellent Lime; the work done with it is very white and neat, therefore 'tis commonly uſed in *finiſhing* of Walls. All Stones, of what ſort ſoever, are ſooner or ſlower burnt, according to the Fire given them; but generally they are burnt in 60 Hours. The Lime being taken out of the Kiln, to ſlack it well, water muſt be pour'd upon it by degrees, and at divers times, till it is well temper'd. It muſt be left afterwards in a ſhady place, without any mixture, only covered lightly with Sand; and when 'tis to be uſed, the more it is beat and mixt with the Sand, the better and ſtronger it will be, except that which is made with the ſcaly Stone of *Padua*; becauſe it muſt be employ'd as ſoon as kiln'd, otherwiſe it waſtes and burns away. To make good Mortar, Sand is to be mixt in ſuch a proportion, that one part of Lime be put with three parts of Pit-Sand, and two parts only of River or Sea-Sand.

CHAP. VI.

Of METALS.

THE Metals uſed in Building are Iron, Lead, and Copper. Iron is fit to make Cramps, Spikes, Nails, Hinges, Bolts, Chains, Locks, and the like works. It is no where found pure; but when the Ore is dug, 'tis purged by the Fire, which renders it liquid; and before 'tis cool, its foulneſs may be eaſily taken away. And after it is ſo purg'd and cool'd, it becomes ſoft and eaſy to be wrought and beat out with the Hammer; but it can't eaſily melt again, except it is put into a Furnace made for that purpoſe. If, being red hot, it is not quickly beat and work'd, it waſtes away. It will be a ſign of its Goodneſs, if being made into Bars, its veins are continu'd ſtrait without interruption, and if the ends of the Bars are clean and without ſoil, or ſcum; becauſe the ſtreightneſs of its veins ſhews the Iron to be without knots, puffs or flaws: and one may judge of the middle by the ends being forg'd into ſquare plates, or any other Figure; and if the ſides are even, one may conclude that it is equally good every where, having equally endur'd the Hammer.

Lead ſerves to cover magnificent Palaces, Towers, Churches, and other publick Buildings: as alſo to make gutters and pipes to convey Water. It is likewiſe uſed in faſtning all manner of Iron-work in Stone, as for example hooks to hang Gates, &c. There are three ſorts thereof, white, black, and of a colour between both, call'd by ſome Aſh-colour. The Black is ſo call'd, not becauſe 'tis really black, but only becauſe it has ſome black ſpots intermixt with its whiteneſs; and therefore to diſtinguiſh it from the other ſort, the Antients have call'd it black. The White is the moſt perfect of the three. The Aſh-colour is between both. Lead is dug in great natural lumps, or in ſmall ſhining blackiſh pieces; or elſe in very thin Leaves which ſtick in Rocks, Marble, Pebbles, Flints, and other Stones. All ſorts of Lead are eaſily melted, becauſe the heat of the Fire makes it Liquid, before it is red-hot; but if 'tis put into a very hot Furnace, it loſes its ſubſtance, and changes partly into Litharge, what remains being nothing but ſcum. Of theſe three ſorts of Lead the black is the ſofteſt, and conſequently very eaſily wrought, but it is heavier than the others. The white is harder and lighter; the Aſh-colour is much harder than the white, but of a middle weight between both.

Copper is ſometimes uſed to cover publick Buildings. The Antients were wont to make a ſort of hook, or cramp with it, to faſten the Stones one with another: by the help of thoſe cramps, a Building was rendred a great deal ſtronger and more durable. The cramps, we now moſt commonly uſe, are made of Iron, but the Antients made them oftner of Copper, becauſe that Metal, being not ſubject to ruſt, it laſts longer. The Letters for Inſcriptions, which they plac'd in the *Entablatures* of their Buildings, were alſo made of that Metal, of which ſeveral Authors affirm, that the hundred famous Gates of *Babylon* were alſo made: as likewiſe the two Pillars of *Hercules* eight Cubits high, in the Iſle of *Gades.* The Copper is eſteem'd the beſt, which being drawn from the Mine, and purg'd by the Fire, is red with a yellow caſt, and full of Pores; for 'tis a ſign of its cleanneſs, without any droſs. Copper may be heated like Iron, and made liquid, ſo that it may be caſt: but if the Fire is too hot, it will not endure it, but totally conſume away. This Metal, altho very hard, is yet very pliable, and dilates it ſelf into very thin Leaves. 'Tis beſt preſerv'd when dipt in Tarr; for tho it does not ruſt like Iron, yet it has a kind of ruſt peculiar to it ſelf called *Ver-de-greaſe*, eſpecially if it touches any ſharp moiſture. Of this Metal mixed with Tin, Lead, and Latten (which laſt is another ſort of Copper colour'd with *Lapis Calaminaris*) is made a Metal call'd Braſs, which oftentimes Architects do uſe in *Baſes* and *Capitels* of Pillars, Statues, Vaſes, and ſuch like Ornaments. There are at *Rome* four Columns of Braſs in the Church of St. *Giovani de Laterano*, one only of which has its *Capitel. Auguſtus* had them caſt out of the Braſs taken from the Prows of thoſe Men of War, that he took from *Marcus Antonius* in *Epirus.*

There remain alſo in *Rome*, to this day, four antient Gates, *viz.* that of the *Rotunda*, formerly the *Pantheon*: that of St. *Adriano*, which was the Temple of *Saturn*: that of St. *Coſmo* and *Damiano*, which was the Temple of *Caſtor* and *Pollux*, or rather of *Remus* and *Romulus*; and that of St. *Agnes*, without the Gate *Viminalis.* But the fineſt of all theſe, is that of St. *Maria Rotunda*, wherein the Antients endeavour'd to imitate by art that kind of *Corinthian* Metal, in which the natural colour of Gold did prevail: for we read that when *Corinth* was deſtroy'd and burnt, all the Gold, Silver, and Copper, which was in that flouriſhing City, being melted and mix'd together into ſeveral lumps, they were ſo variouſly temper'd, that it made the three ſorts of Metal, which afterwards were call'd *Corinthian*. That, in which Silver prevailed, remain'd white; where Gold, it took the yellow; and the third was that, in which all theſe three Metals were of a pretty equal quantity. Theſe three ſorts of Metal have been ſince imitated by Workmen, in many different ways.

Hitherto having diſcours'd of thoſe things which are to be conſider'd and provided, before one thinks of Building, it now remains that ſomething be ſaid of Foundations, ſince the work by them muſt begin.

CHAP. VII.

Of the Qualities of the Ground, wherein Foundations are to be laid.

WHAT we call the Foundation of a Building is properly the *Baſis* of it, that is to ſay, that part which is under Ground, and ſupports what appears above. Of all the faults therefore which are committed in Building, thoſe about the Foundations are the moſt prejudicial to it; becauſe they indanger the whole Fabrick, and they can't be rectify'd without great difficulty and expence. The Architect therefore ought to be extraordinary nice in the ſetting of the Foundations, ſince in ſome places it is ſolid enough from the nature of the Soil, and in other places it is neceſſary to be made ſo by Art.

A natural Foundation is, when the Soil is rocky, or of a ſoft ſandy Stone, or Gravel; for then without digging, or other helps of art, the earth it ſelf is an excellent Foundation, and capable to bear the greateſt Building both in Land and Water. But if nature affords not a Foundation, it muſt be compaſs'd by Art; and then the place to build upon, is either a ſolid Earth, or Clay, or 'tis Sand, or ſoft and moiſt Ground, or marſhy Land. If the Earth is firm and ſolid, one may dig ſo far as to a diſcreet Architect may ſeem requiſite for the quality of the Building, and the ſoundneſs of the Earth it ſelf. If no Cellars, or other underground Offices are intended, a ſixth part of the height of the Building may be a ſufficient depth. One may judge of the firmneſs of the Earth by digging of Wells, Ciſterns, and ſuch like. 'Tis alſo known by Herbs growing upon the place, as if ſuch do uſually grow only in firm and ſolid Ground; or if a great weight be thrown thereon, it neither reſounds nor ſhakes; and from the report of a Drum, being ſet on the Ground, and if lightly touch'd, it does not ſound again; or if Water put in a Veſſel does not ſhake. The neighbouring places will alſo help one to know the firmneſs of the Earth. But if the place be ſandy or gravelly, it is to be conſider'd whether it be on Land or in Water; becauſe if it be on Land, it will be ſufficient to obſerve what has been already ſaid concerning ſolid Ground: but if you are to build in Water, the Sand, or Gravel is altogether uſeleſs; becauſe the Water, by its continual ſtream and flood, changes its Bed. Therefore one muſt dig till a ſolid bottom is found; but if that can't be done, or is judg'd to be difficult, then dig ſomewhat in the Sand, or Gravel, and ſo drive Piles whoſe ends may reach to the ſound and good Earth, and upon thoſe Piles cover'd with Planks one may venture to build. But if there is a neceſſity to build upon a looſe or made Ground, then one muſt dig as far as the ſolid and ſound Earth, and therein alſo in proportion to the bigneſs of the Walls, and the greatneſs of the Building.

The ſolid ground fit to build upon, is of divers ſorts; for, as *Leo Baptiſta Alberti* well remarks, it is in ſome places ſo hard as ſcarce to be open'd with the proper Tools, nay ſometimes as hard as Iron it ſelf: in other places blackiſh, in ſome places whitiſh, which is accounted the weakeſt; in ſome places like Chalk, in others Sandy. Of all theſe the beſt is that which is cut with more difficulty, or if being wet, it does not diſſolve into dirt.

No Foundation ought to be dug on the Water-ſide, before one has carefully ſounded the bottom. If it is marſhy and ſoft, then it ought to be ſtrengthen'd with Piles, whoſe length muſt be an eighth part of the height of the Wall, and thick by a twelfth part of their length. The Piles muſt be drove in as cloſe as poſſible, and ramm'd with blows rather quick than heavy; ſo that the Earth may the better conſolidate and faſten. Not only the out-Walls are to be ſupported in that manner, but alſo the inner and croſs-Walls; for if the Foundation for the inward-Walls differ from thoſe without, then laying the Girders along one by the other, and the Joyſts croſs upon them, it may happen that the inward Walls ſhall ſink, when at the ſame time, the out-Walls being upon Piles, ſhall not ſtir: both of them conſequently will crack, and cauſe the ruin of the whole. Therefore the Expence of the Piles being leſs to be fear'd than the falling of the Building; the Piles muſt not be ſpar'd, but diſtributed according to the proportion of the Walls, thoſe in the middle being plac'd ſomewhat thinner than thoſe without.

CHAP. VIII.

Of FOUNDATIONS.

THE Foundations ought to be twice as thick as the Walls to be rais'd upon them, ſo that both the quality of the Earth and the greatneſs of the Building are to be regarded, making the Foundation larger in a ſoft and looſe Ground, or where there is a great weight to be ſupported. The *plane* of the Trench muſt be level, ſo that the weight may preſs equally every where; and not inclining more on one ſide than the other, which occaſions the cleaving of the Walls. For this reaſon the Antients uſed to pave the *plane* with *Tivertine*, but we moſt commonly uſe to lay Planks or Beams to build on. The Foundations ought to be made ſloping, that is to ſay, to diminiſh as they riſe; but yet in ſuch a manner, that the middle of the Wall above may fall *plum* with the middle of the loweſt part; which muſt be alſo obſerv'd in the diminution of Walls above Ground, becauſe by that means the Building becomes much ſtronger, than by making the diminution any other way.

Sometimes to avoid Charges (eſpecially in mooriſh Grounds, where there is a neceſſity to uſe Piles) Foundations are arch'd like a Bridge, and the Walls are built upon thoſe Arches. In great

Buildings 'tis very proper to make vents through the body of the Walls from the Foundations to the Roof, becauſe they let forth the Winds and other Vapours, which are very prejudicial to Buildings; they leſſen the Charges, and are of no ſmall conveniency, eſpecially when there is occaſion for winding-ſtairs from the bottom to the top.

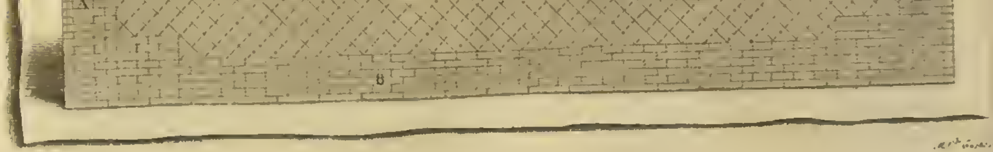
CHAP. IX.

Of the ſeveral ſorts of Walls.

THE Foundations being laid, it remains that we treat of the Elevation of the Walls above ground. The Antients had ſix ſorts of Walls, one of which call'd *Reticulata*, or *Net-work:* another of *Quadrels*, or Bricks: the third of *Cement*, which is a mixture of Flints, or Pebbles and Earth roughly laid with, or without Morter: the fourth made of various Stones, and call'd *Ruſtick:* the fifth of ſquar'd Stones: the ſixth called *Rimpiuta*, or *Coffer-work.* The *Net*, or *Chequer-work* is no more in uſe at this time; but becauſe *Vitruvius* relates that it was common in his time, I would not omit to give here the deſign of it.

The Corners of the Building, or Wall, were made of Bricks; and between every two Foot and a half, three courſes of Bricks were laid as a band to the whole work.

A. *Corners of Bricks.*
B. *Courſes of Bricks which bind the whole Wall.*
C. *The Net or Chequer-work.*
D. *Courſes of Bricks, through the thickneſs of the Wall.*
E. *The inward part of the Wall made of Cement.*



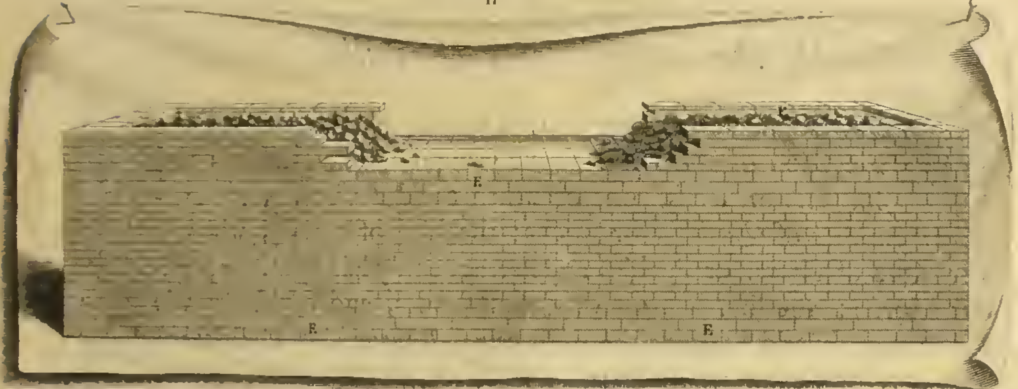
Brick-walls,

E. *Courſes of Bricks which bind the whole Wall.*

F. *The middle part of the Wall made of Cement.*

Brick-walls, both thoſe which incloſe a City, and thoſe deſigned for a great Edifice, muſt be fac'd on both ſides with Bricks, and the middle fill'd up with Cement, ramm'd together with Brick-bats: and to every three Foot in height, there muſt be three courſes of Bricks of the biggeſt ſort, through the whole breadth of the Wall; the firſt courſe being laid the leſſer part out-ſide; the ſecond the length laid ſide-way; the third as the firſt; and ſo forth. Of this ſort are the Walls of the *Rotunda* in *Rome*, and the Bath of *Diocleſian*, and moſt of all the other antient Buildings.

II



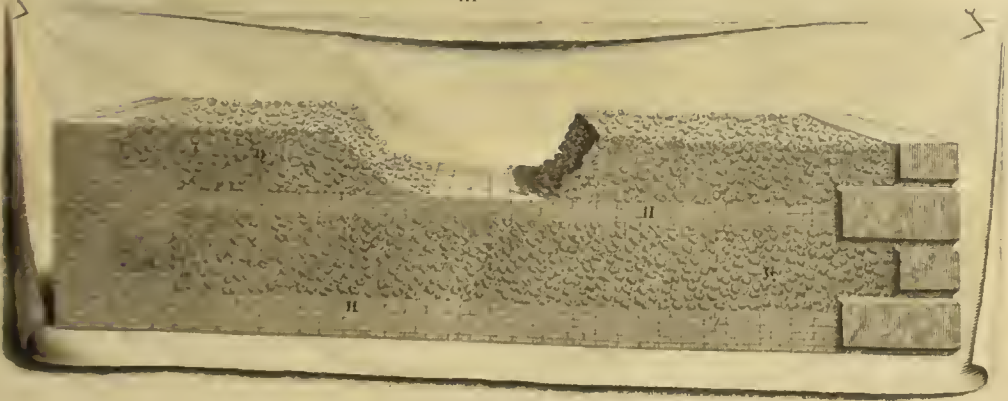
G. *Cement, or River-pebbles.*

H. *Courſes of Bricks which bind the whole Wall.*

The walls of *Cement* muſt be order'd in ſuch a manner, that to every two Foot at leaſt, there be three courſes of Bricks diſpos'd as before. The Walls of *Turin* in *Piemont*, have been made after that manner, that is of large River-pebbles ſplit in the middle, which, being laid with the ſplit-ſide outwards, make very ſmooth work and agreeable to look upon.

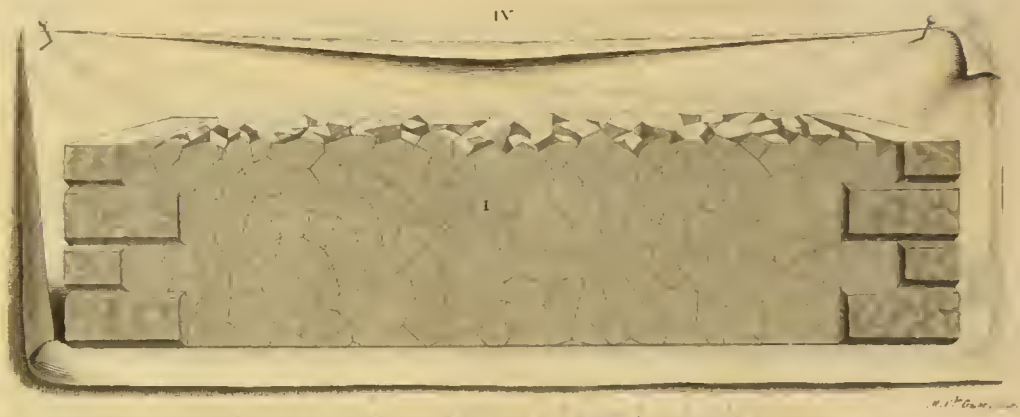
The Walls of the *Arena* in *Verona* are likewiſe of Cement, and to every three Foot, there are three courſes of Bricks. In like manner are built many antient Edifices which I have mention'd in my book of *Antiquities*.

III



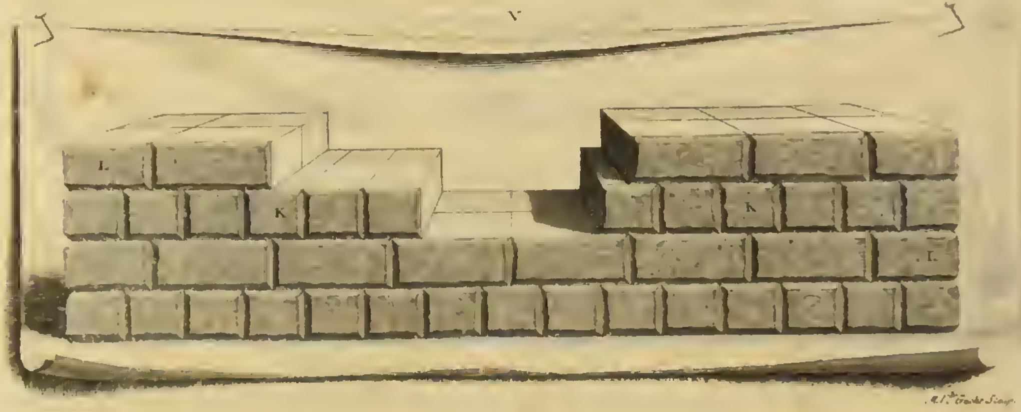
The Walls made of uncertain, or irregular Stones of different ſorts, were call'd *Ruſtick*, by reaſon of the various ſhapes of the Stones. In the building of theſe Walls they made uſe of a leaden Rule, which being bended according to the place where the Stone was to be laid, ſhew'd how it was to be form'd and ſquar'd; ſo that without any more ado, the Stone was fix'd in its deſign'd place. Of this ſort may be ſeen the Walls at *Preneſte*, and the antient Streets were paved in this manner.

I. *Irregular or Ruſtick Stones.*



Walls of Free-ſtones may be ſeen at *Rome* in that place, where were formerly the *Piazza* and the Temple of *Auguſtus*, in which the leſſer Stones were inclos'd with ſome Courſes of greater ones.

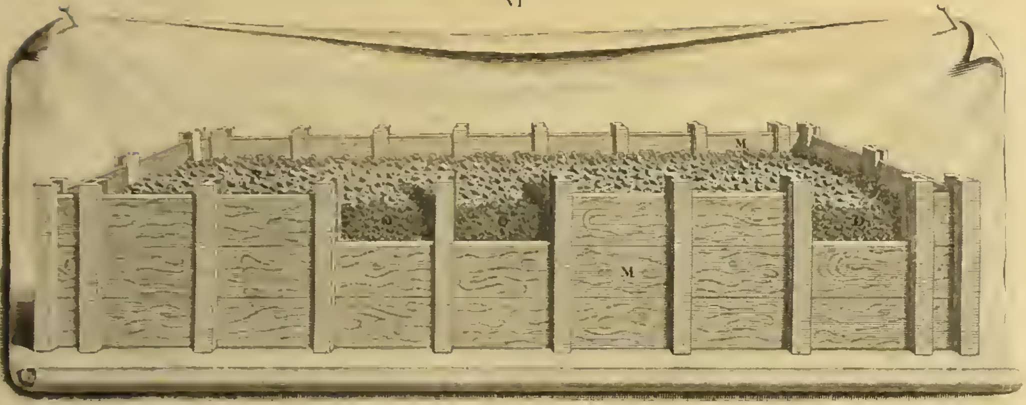
K. *Courſes of leſſer Stones.*
L. *Courſes of Larger Stones.*



M *Planks put edge-way.* N. *The inward part of the Wall.* O. *The Face of the Wall, the Planks being taken away.*

The Antients uſed to make Walls called *Reimpiuta*, that is fill'd up with ragged Stones, which is alſo call'd *Coffer-work*, taking Planks and placing them edge-way in two rows diſtant one from another, to the thickneſs they intended to give the Wall; filling the ſpace between thoſe two rows of Planks with *Cement*, Stones of all ſorts, Earth and Mortar mingled together: and ſo they went on from Courſe to Courſe. Such Walls are ſeen at *Sirmion* upon the Lake *di Guarda*.

VI

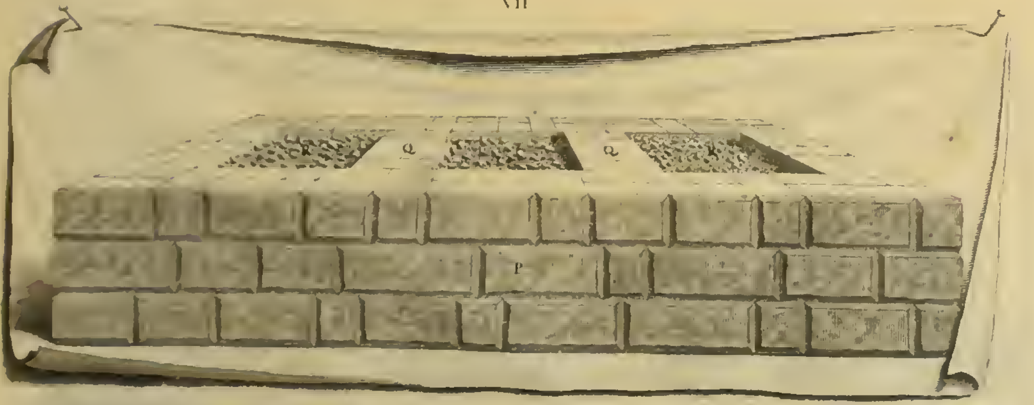


M. Vdr Gucht Sculp.

P. *The outward-rows of Stones.* Q. *The croſſing-rows.* R. *Coffers filled with Stones and Earth.*

Of this kind may be call'd the antient Walls of *Naples*, which are made of two rows of free Stones four Foot thick, and ſix Foot diſtant the one from the other: theſe two rows of Stones are bound together with other croſſing-rows, ſo the Space, or *Coffers*, which were between the croſſing-rows and the out-rows of Stones, being four foot ſquare, were fill'd up with Stones and Earth.

VII



M. Vdr Gucht Sculp.

Theſe in a word, are all the forms which the Antients gave to their Walls, the Foot-ſteps whereof are yet to be ſeen: from whence one may eaſily conclude, that Walls of what ſort ſoever they be, ought to have ſome chief courſes of a larger and harder matter than the reſt, to ſerve like Sinews to hold faſt all the other parts together, which chiefly is to be obſerv'd, when Walls are made of Bricks: to the end that, if in proceſs of time the Walls ſhould happen to ſink, or give more on one ſide than the other, the reſt might not become likewiſe ruinous: as has happen'd in many Walls, eſpecially on that ſide that looks towards the North.

CHAP. X.

Of the Method which the Antients did practiſe, in erecting their Stone Buildings.

WHEREAS it happens ſometimes that Buildings are made, the whole, or a good part of Marble, or of ſome other great Stones, I think it very proper here to explain what the Antients did on ſuch occaſions, becauſe it is to be obſerv'd in their works, that they were ſo nice in the joining of their Stones together, that ſometimes the joints are difficult to be perceiv'd: which every one ought carefully to conſider, who beſides the Beauty, deſires alſo the ſolidity and laſtingneſs of the work. As far as I can underſtand, they firſt ſquar'd and wrought thoſe ſides of the Stones, which were to be laid one upon the other, leaving the other ſides rough, ſo that the edges of the Stones being thicker, men might move them with leſs danger of breaking, or bruiſing them, than if they had been ſquar'd, and conſequently thinner, on all ſides before. In this manner they made their Stone Buildings *ruſtick*, or rather rough, till they had quite erected them to the very top; after which they went on working and poliſhing that face of the Stone which was expos'd to the ſight. It is true that the *Roſes* which are between the *Modilions*, and such other like Ornaments of the *Cornice*, which could not conveniently be work'd after the fixing of the Stones, were made before while they lay on the Earth. This may be eaſily obſerv'd in ſeveral antient Edifices, where many Stones remain rough and unpoliſh'd, juſt as they were laid. The

Arch near the old Caſtle in *Verona*, and all the other Arches and Buildings there, were done in the ſame manner; as it appears by the very marks of the Tools, which ſhew how the Stones were wrought. The *Trajan* and *Antonin* Columns at *Rome* were alſo wrought in that manner; otherwiſe they could never have ſo exactly join'd the Stones, as to meet ſo cloſely croſs the Heads and other parts of the Figures. The ſame I ſay of other Arches that are to be ſeen. When they went about ſome great piece of Building, as the *Arena* in *Verona*, the Amphitheatre of *Pola*, and the like, to ſave the exceſſive charge and length of time, which the finiſhing of ſuch Works would have requir'd, they wrought only the *Impoſts* of the Arches, the *Capitels*, and *Cornices*; and left the reſt *ruſtick*, having only regard to the beauty of the whole Fabrick. But in their Temples, or rather ſumptuous Buildings, which requir'd more Curioſity, they ſpar'd no pains nor coſt in the working them; poliſhing and glazing even to the very *Channelling* or *Flutes* of the Columns, with great exactneſs. Therefore in my judgment, Brick-walls ought not to be *ruſticated*, much leſs the Mantles of Chimneys, which require the moſt curious Workmanſhip: for beſides the miſapplying of that ſort of work, it would look as if one had a mind to make a thing, which naturally ought to be entire, appear to be divided and made of ſeveral pieces. But indeed, according to the greatneſs and quality of the Building, it may be made either *ruſtick*, or after a more elegant manner: for what the Antients did with Reaſon, when they were neceſſitated by the greatneſs of their Edifices; we ought not to imitate, when ſmaller Buildings require neatneſs.

CHAP. XI.

Of the Diminution of the Walls, and the parts of the ſame.

IT is to be obſerv'd, in the erecting of the Walls, that they ought to diminiſh proportionably, as they are rais'd and grow higher. That part therefore which appears above Ground, is to be one half thinner than the Foundations; and the ſecond Story half a Brick thinner than the firſt Story, and ſo ſucceſſively to the top; but ſtill with ſuch diſcretion, that the upper-moſt part of all be not too weak. The middle of the upmoſt Wall ought to be perpendicular with the middle of the nethermoſt, ſo that the whole Wall becomes of a *pyramidal* form. But if there is a neceſſity to make one of the two ſuperfices of the Walls *plum*, it muſt be inwardly; becauſe the Floors, the Vaults, the croſs-Walls, and other ſupporters of the Building, will keep the out-Walls from falling, or giving way. The diſcharg'd parts of the outſide may be cover'd with a *Faſcia*, or *Cornice*, incompaſſing the whole Building, which will be both an Ornament and a Binding to the whole Fabrick.

The Angles, being common to two Faces, in order to keep them upright and faſt together, muſt be made very ſtrong, and held with long and hard Stones as it were with Arms: wherefore the Windows, and other like openings, ought to be made far from the Angles; or at leaſt ſo much ſpace muſt be left between them and the ſaid openings, as is the breadth of any of the openings.

Having ſpoken hitherto of mere Walls, 'tis now time we ſhould paſs to their Ornaments, the greateſt of all which are the *Columns*, when they are fitly plac'd, and in their due proportion with the whole Fabrick.

CHAP. XII.

Of the five Orders uſed by the Antients.

THE antient Architects have made uſe of five different Orders call'd by them, the *Tuſcan*, *Dorick*, *Ionick*, *Corinthian*, and *Compoſite* Orders. Theſe, in a Building ought to be diſpos'd in ſuch a manner, that the ſtrongeſt be always ſet lowermoſt, as being more capable of bearing the weight, and alſo to give the Building a more ſure Foundation: wherefore the *Dorick* muſt always bear the *Ionick*, the *Ionick* the *Corinthian*, and the *Corinthian* the *Compoſite*. The *Tuſcan* is ſo rude and material, that it is ſeldom uſed above ground, unleſs it be for a *Ruſtick* Edifice of one Order only; or in ſome vaſt Building, as *Amphitheaters* and ſuch like, which having many Orders one upon the other; this inſtead of the *Dorick*, is plac'd under the *Ionick*. But if an Architect has a mind to leave out one of them, and place (for Example) the *Corinthian* immediately over the *Dorick*, it may be done; provided always, according to the rule aforeſaid, that the more ſolid be the loweſt. I ſhall ſet down the meaſures and proportions of each of theſe Orders, not ſo much according to *Vitruvius*, as to my own Obſervations on the antient Buildings: but firſt it ſeems neceſſary to explain thoſe things which belong to all the Orders in general.

CHAP. XIII.

Of the ſwelling and diminution of Columns, of inter-Columns and Pilaſters, which divide and ſupport the Arches.

*THE Columns of every Order agree in this, that the upper part is to be leſſer than the lower, with a little ſwelling about the middle. In the diminiſhing of them it muſt be obſerv'd, that by how much longer they are, by ſo much the leſs they muſt diminiſh, becauſe the height has already the effect of diminiſhing them by the diſtance. Therefore if the Column is 15 Foot high, the Diameter of it, towards its *baſis*, muſt be divided into 6 half parts, to give 5 halfs of them to the diameter next to the *Capitel*. If the Column be from 15 to 20, the ſaid diameter below ſhall be divided into 7 parts, 6 halfs of which muſt be the diameter above. So likewiſe in thoſe from 20 to 30 the lower diameter ought to be divided into 8 parts, and 7 of them ſhall be the upper diameter: and ſo proportionably for the higheſt, as *Vitruvius* teaches in his 2d Chapter of his 3d Book. But as to the method of making the *ſwelling* part of the Column, we have no more from that Author, but a bare promiſe, and therefore many have written as they thought beſt upon that Subject. For my part, I am wont to make the profil of the ſaid *ſwelling* in this manner. I divide the *ſhaft* of the Column into three equal parts, drawing the lower third part perpendicular, at the extremity of which I lay a thin bending Rule, as long as the Column, or a little more; and bending that part of the Rule, till the end touches at the point of the dimination under the *Collarino*, or *Aſtragal*, I follow the bent of the Rule, and ſo the Column becomes ſomewhat ſwelled in the middle, and diminiſhes towards the top very handſomly. And altho' I could not contrive a ſhorter, or eaſier way, or which

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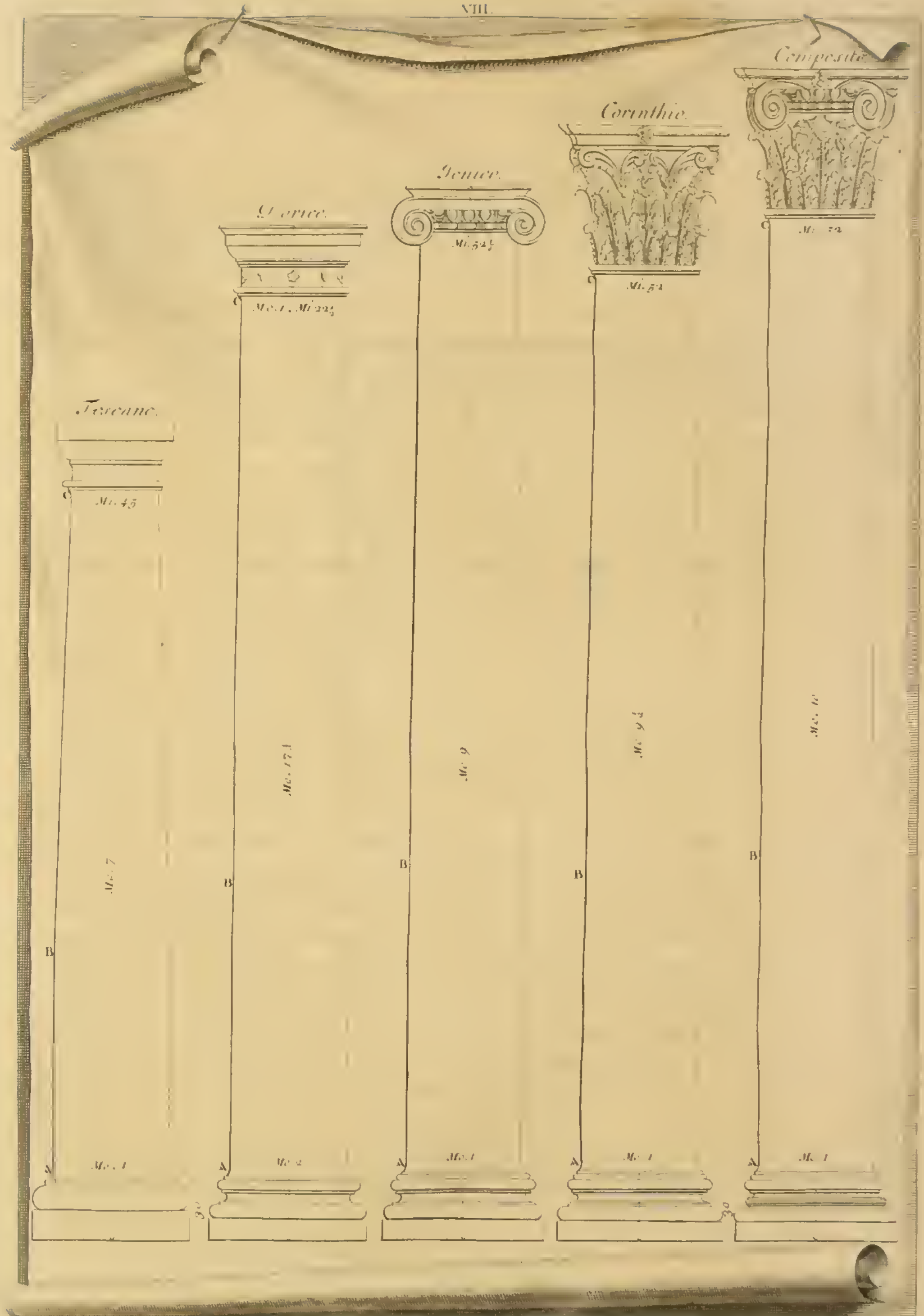
* Plate

VIII.



Toscane.
Mi. 45
Mi. 7
Mi. 1
Dorice.
Mo. 1. Mi. 22½
Mi. 17½
Mi. 2
Ionice.
Mi. 52½
Mi. 9
Mi. 1
Corinthie.
Mi. 52
Mi. 9½
Mi. 1
Composite.
Mi. 72
Mi. 10
Mi. 1
A
B
C

has a better ſucceſs in practice; yet I was the more confirm'd in this method, ſince after having told *Peter Cattaneo* of it, he was ſo much pleas'd with it, that he has mention'd it in his fine Treatiſe of Architecture, with which he has not a little illuſtrated our Profeſſion.

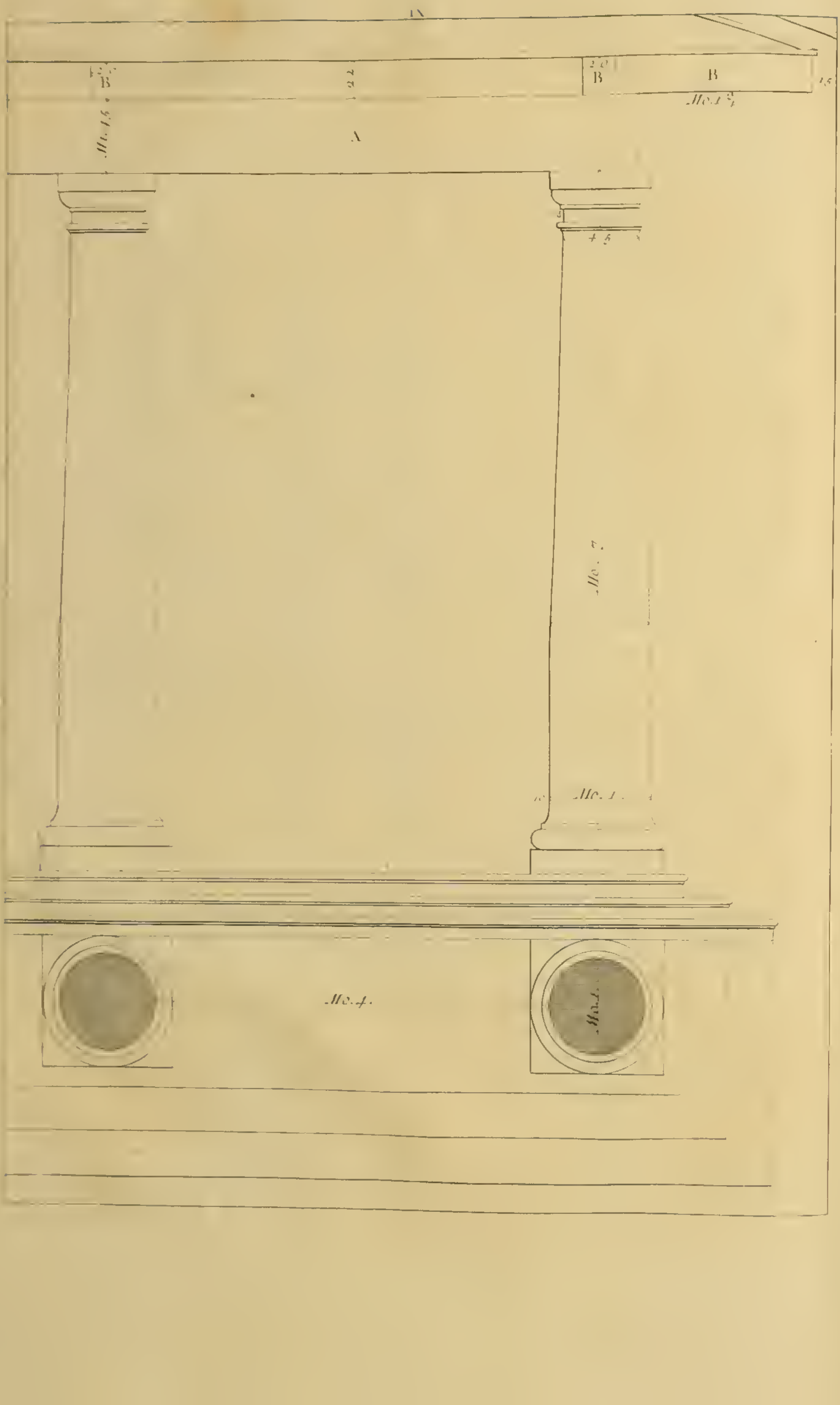
A B. *The third part of the Column which is perpendicular.*
B C. *The two thirds which are gradually diminiſhing.*
C. *The point under the* Collarino *or* Aſtragal, *where the Diminution ends.*

The *Inter-columns*, that is to ſay, the ſpaces between the Columns, may be made of a diameter and a half of the Column (the diameter being always taken at the lower part of the Column) or of two diameters, of two and a quarter, ſometimes of three, and ſometimes of more. The Antients notwithſtanding never gave more than three diameters, except in the *Tuſcan* order; in which, the *Architrave* being made of Timber, they kept the *Inter-columns* very large: but on the other hand, they never made them leſs than a diameter and a half; they allow'd this ſpace, eſpecially when the Columns were to be extremely high. But amongſt ſuch variety of *Inter-columns*, that of two diameters and a quarter was look'd upon as the moſt noble and moſt beautiful of all.

'Tis of abſolute neceſſity, to keep a certain proportion between the Columns and the *Inter-columns*: for leaving too much vacancy between ſmall Columns, they will loſe a great deal of their Beauty, becauſe too great a quantity of Air between them, diminiſhes conſiderably their thickneſs: and on the contrary, in leaving too little ſpace between great Columns, the ſtreightneſs of the vacancy will make them appear too thick, and without any grace. Therefore if the ſpaces exceed three diameters, the Columns ought to have in thickneſs the ſeventh part of their height, as I ſhall obſerve hereafter in the *Tuſcan* Order. But if the ſpaces are to be of three diameters, the length of the Columns muſt be 7 and a half or 8, as in the *Dorick* Order: if 2 and a quarter, the length of the Column muſt be 9, as in the *Ionick*: if 2 only, the Column muſt be 9 and a half, as in the *Corinthian*: laſtly, if 1 and a half, the Column ſhall have 10 diameters, as in the *Compoſite*. Upon theſe Orders I have made ſuch Obſervations, that they may ſerve for Examples in all the Inter-Columns, which *Vitruvius* has mention'd in the 2d Chapter of his 3d Book aforeſaid.

In the front of Buildings the Columns ought to be an even number, that ſo the middle *Inter-column* being left bigger than the reſt, the Doors and Entrys, which are uſually plac'd in the middle, may be the better ſeen; and thus much for ſingle Pillars, or *Collonades.* But if Galleries are to be made with Arches and Peers, the Arches muſt be diſpos'd in ſuch a manner, that the *Pilaſters,* or *Peers* between the Arches, be no leſs than a third part of the vacancy between two Pilaſters: and thoſe at the corner muſt be two thirds of the ſaid vacancy, that the Angles of the Building may be ſo much the firmer and ſtronger. And when they are to ſupport an extraordinary weight, as in a very large Fabrick, then they muſt be the half of the vacancy, which may be ſeen in the Arch of *Vicenza,* and in the Amphitheatre of *Capua:* or elſe two thirds, as thoſe of the Theatre of *Marcellus* at *Rome,* and in that of *Ogubius,* which now belongs to *Ludovico de Gabrielli* a Gentleman of that City. The Antients made them ſometimes as large as the whole ſpace, as in the Theatre of *Verona,* in that part which is not on the Hill. But in private Buildings, they are not to be made leſs than a third of the ſpace, nor larger than two thirds; and altho they ought to be ſquare, yet to ſave charge, and to make more room to walk by, they may be made leſs in the Flank than in the Front: and to inrich the ſame, half Columns, or Pilaſters, may be put in the middle, to bear the great Cornice above the Arches; which half Columns, or Pilaſters, muſt be as large as their height requires, according to their ſeveral Orders, as it will appear in the enſuing Chapters and Deſigns. For underſtanding of theſe (that I may not repeat the ſame thing over and over) it muſt be obſerv'd, that in dividing and meaſuring the ſaid Orders, I did not think fit to make uſe of any determinate meaſure peculiar to any particular City, as a *fathom, foot, ſpan,* or the like, knowing that meaſures are as various as the Cities and Countries themſelves: but in imitation of *Vitruvius,* who divides the *Dorick* Order with a meaſure taken from the diameter of the Column, common to all (and by him called a *Module*) my meaſure in all the Orders ſhall be the diameter of the Column taken at the baſe, and divided into 60 parts, or minutes; except in the *Dorick,* in which the *module* is to be the half diameter of the Column, and is divided into 30 parts, becauſe it ſo falls more commodious in the diviſions of that Order. Therefore every one may divide the *module* into as many, or as few parts as may be thought moſt convenient, according to the bigneſs, or ſmallneſs of a Building; and uſe the proportions and *profils* which I have here deſign'd for each Order.

CHAP.



IX
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22
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B
B
15
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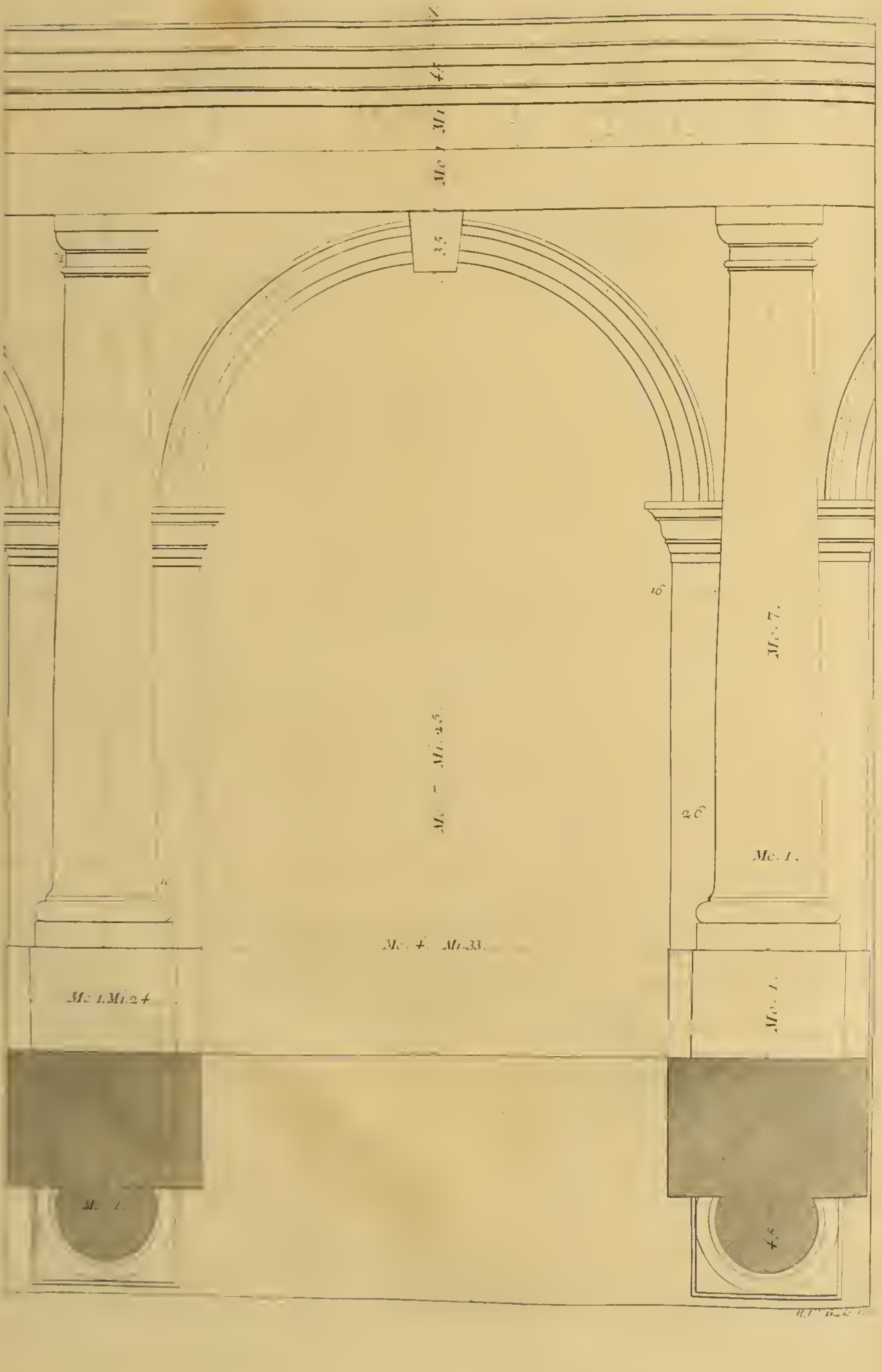
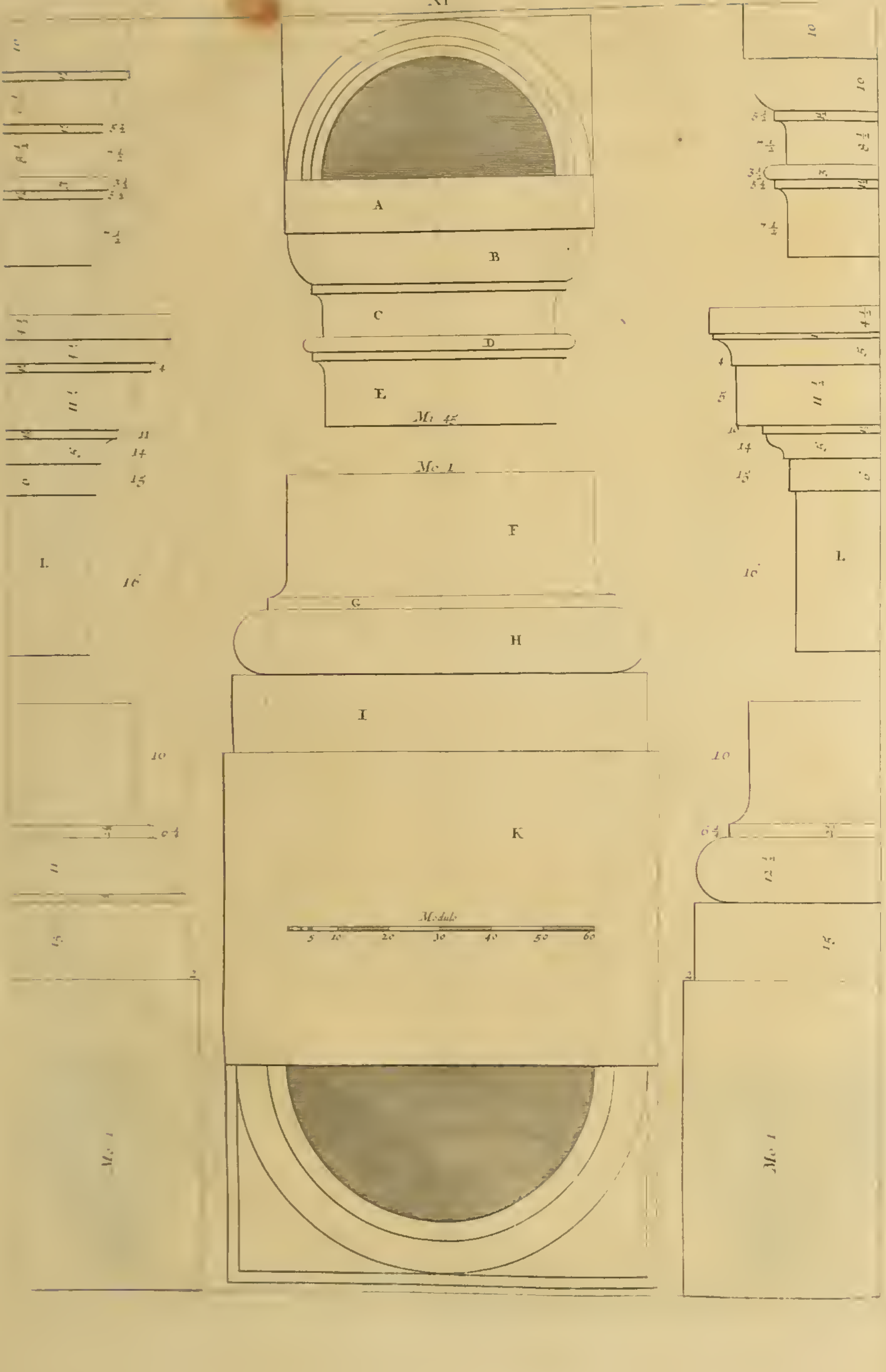
A
Mo.1.5
4.5
Mo.7
Mo.1
Mo.4
Mo.1


Mc 1 Mi 43
35
Mc - Mi 25
16
26
Mc 7.
Mc 1.
Mc 4. Mi 33.
Mc 1. Mi 24
Mc 1.
Mc 1.
45

XI



A
B
C
D
E
Mi 45
Mo 1
F
G
H
I
K
L
L
16
10
10
10
10
5½
7½
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11
14
15
6½
12½
15
2
2
Modulo
5
10
20
30
40
50
60
Mo 1
Mo 1

CHAP. XIV.

Of the TUSCAN *Order.*

*THE *Tuſcan* Order, according to what *Vitruvius* writes of it, and what it is in effect, is the plaineſt and moſt ſimple of all the Orders of Architecture; becauſe it retains more of the antient ſimplicity of the firſt Architects, who had not yet invented thoſe Ornaments that render the other Orders ſo pleaſant and ſo worthy of conſideration. This Order draws its original from *Tuſcany*, a Country very remarkable in *Italy*, where it ſtill preſerves its name.

The Column with its *Baſe* and *Capitel*, ought to be in length ſeven *Modules*, and the top diminiſh'd by a fourth part of its bigneſs. If one is to make a row of Columns of this order only, the *Inter-columns* may be kept very large, becauſe the Architraves are commonly made of Timber; and for that reaſon, this order will be very convenient for a Country-building, for the going in and out of Carts, and other Country conveniencies, beſides that the charge will be leſs conſiderable.

A. *Architrave of Timber.*

B. *The ends of the Traves, or Joyſts which make the Corona.*

† But if one would make Gates, or Galleries with Arches, then the meaſures, which I have mark'd in the deſign, muſt be ſtrictly obſerv'd, wherein the Stones are ſo diſpos'd and join'd together, as I think they ought to be, when the whole work is to be made of Stone. The ſame obſervation I have made for the four following orders; and this way of diſpoſing and faſtening the Stones, I have taken from many antient Arches, as will appear in my Book of *Arches*, wherein I have us'd the utmoſt care and diligence.

** The *Pedeſtals* to be made under the Columns of this Order, muſt have a module in height, and be made plain. The *Baſis* is to be in height the half diameter of the Column; and this height is to be divided into two equal parts, whereof one is given to the *Orlo*, or *Plinth*, which muſt be made round, *or ſquare according to ſome.* The other is divided into four parts; one for the *Liſtella*, or *Cincture*, which ſometimes may be made a little leſs. In this Order only, it makes a part of the *Baſis*, for in all the others, it is join'd with the *ſhaft* of the Column. The other three

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* *Plate* IX. † *Plate* X. ** *Plate* XI.

parts are for the *Torus*. The projecture of this *baſis* is a ſixth part of a *module*, or of the diameter of the Column. The *Capitel* is likewiſe the height of half the diameter of the Column below, and is divided into two or three equal parts: one is given to the *Abacus*, which from its form, is commonly call'd *Dado*, or *Dye*; the other to the *Ovolo*, and the third is ſubdivided into ſeven parts. Of one is made the *Liſtella* under the *Ovolo*, and the other ſix remain for the *Collarino*, or the *Neck* of the Column. The *Aſtragal* is double the height of the *Liſtella* under the *Ovolo*, and its center is made upon the line which falls *plum* from the ſaid *Liſtella*, the projecture of which falls perpendicularly upon the *Liſtella*, or *Cincture*, below the *Aſtragal*, which is as thick as the other. The projecture of the *Capitel* anſwers to the body of the column below. Its *Architrave* is made of wood, ſquare every way, and its breadth is not to exceed the body of the column at the top. The *Traves*, or *Joyſts*, which bear the *Eaves*, project a fourth part of the length of the Column. Theſe are the meaſures of the *Tuſcan* Order, as taught by *Vitruvius*.

A. *Abacus*.
B. *Ovolo*, or *Echinus*.
C. *Collarino*, or *Friſe* of the *Capitel*.
D. *Aſtragal*.
E. *The Body of the Column above*.
F. *The Body of the Column below*.
G. *Liſtella*, or *Cincture*, or *Annulet*.
H. *Torus*, or *Tore*.
I. *Orlo*, or *Plinth*.
K. *Pedeſtal*, or *Stylobatum*.

The *Profils* mark'd L. are the *impoſts* of the Arches.

* But if the *Architrave* is to be made of Stone, what was ſaid before of the *Inter-columns* muſt be obſerv'd. There are to be ſeen ſome antient Buildings which may be ſaid to have been built according to this Order, becauſe they retain in part the ſame meaſures, as in the *Arena* of *Verona*, and the *Arena* and Theatre of *Pola* and many others, of which I have drawn the *Profils* of the *Baſis*, *Capitels*, *Architraves*, *Friſes*, and *Cornices*, which are in the laſt Plate of this Chapter, as thoſe of the *Impoſts* of the Vaults and Arches; of all which I ſhall put the deſigns into my Book of *Antiquities*.

A. *Cimaſium*, or *Cima recta*.
B. *Corona*.

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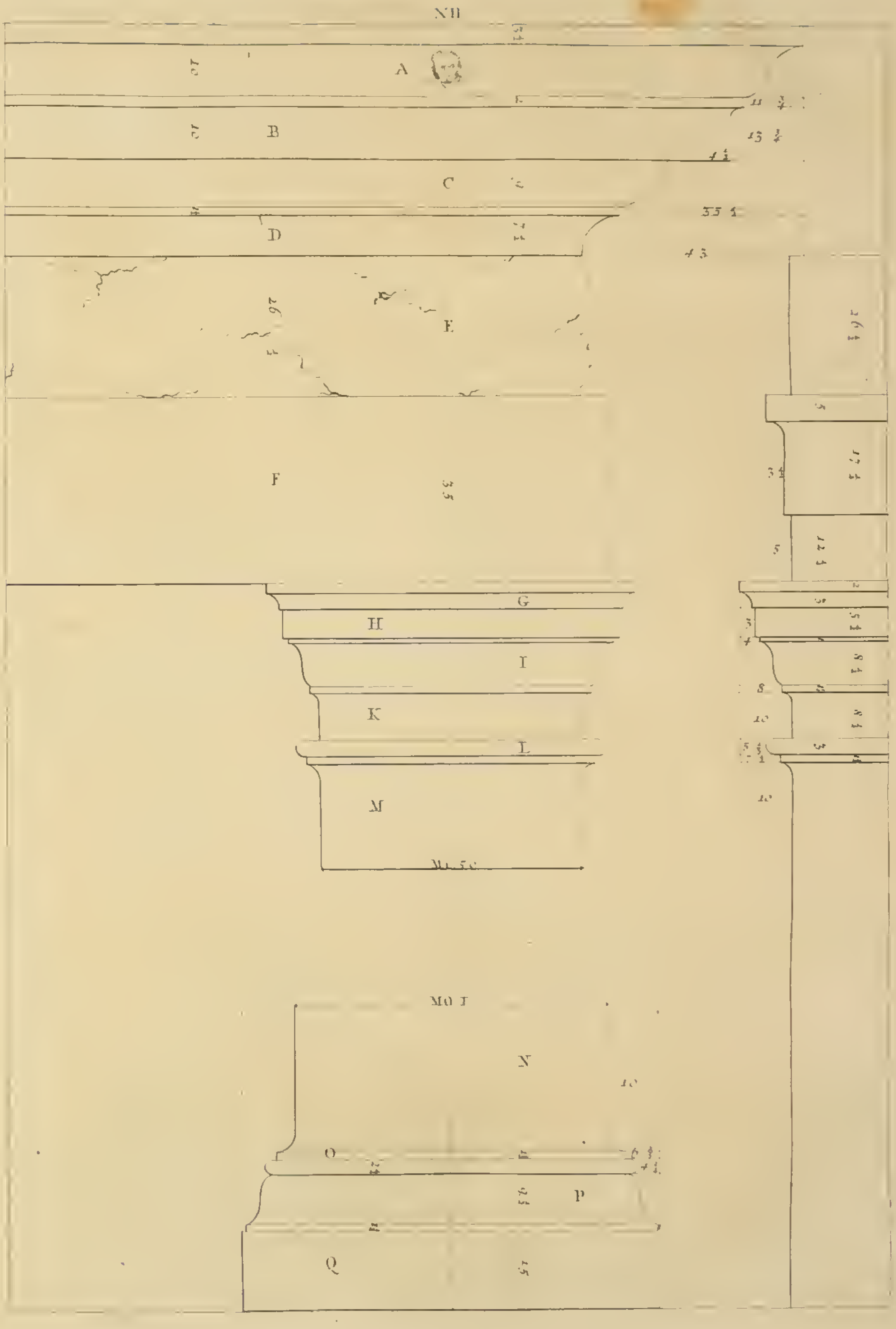
* *Plate* XII


XII
A
B
C
D
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I
K
L
M
Mo. 50
Mo. I
N
O
P
Q
11 ¾
13 ¾
4 ½
35 ½
43
3 ½
5
8
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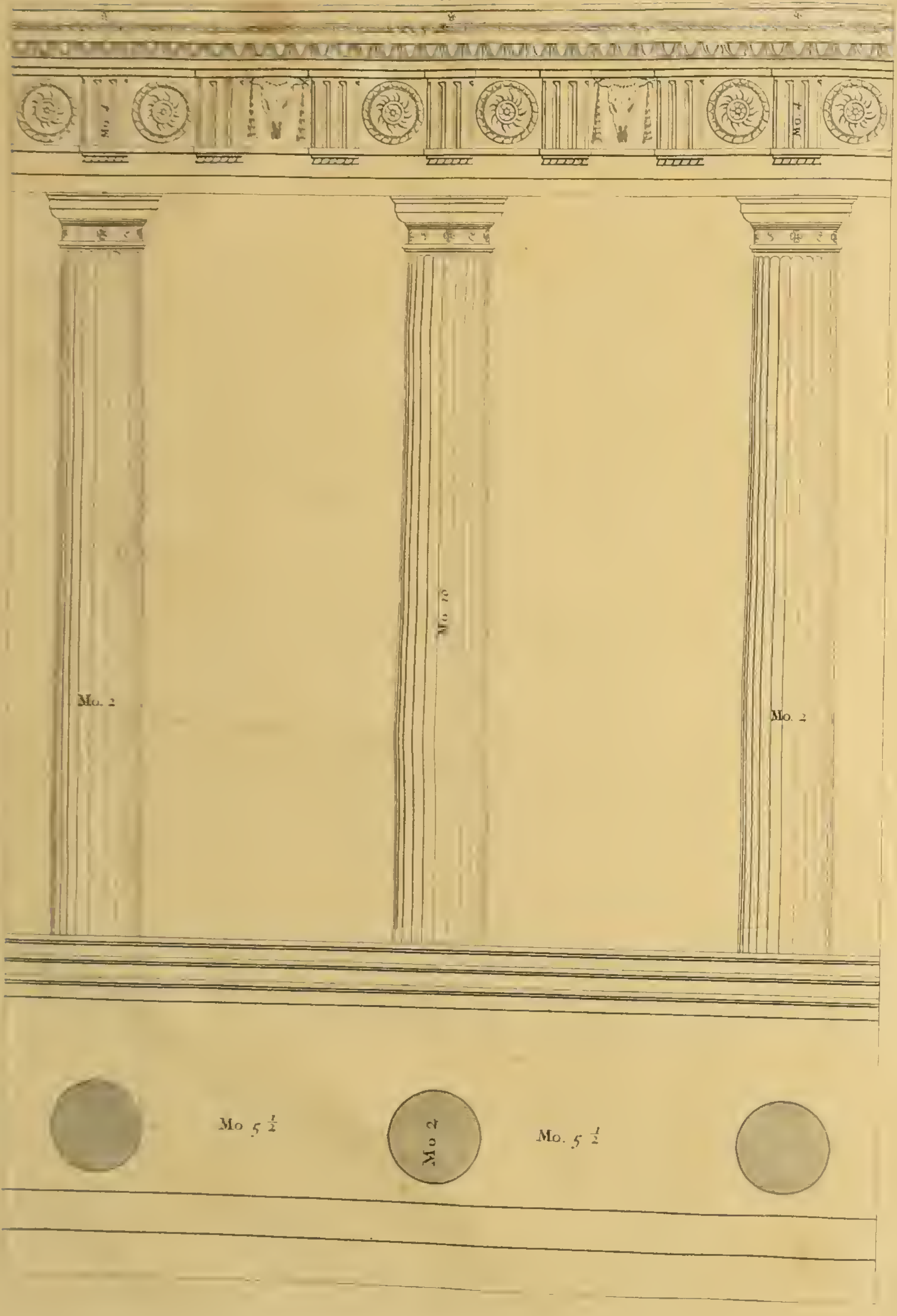
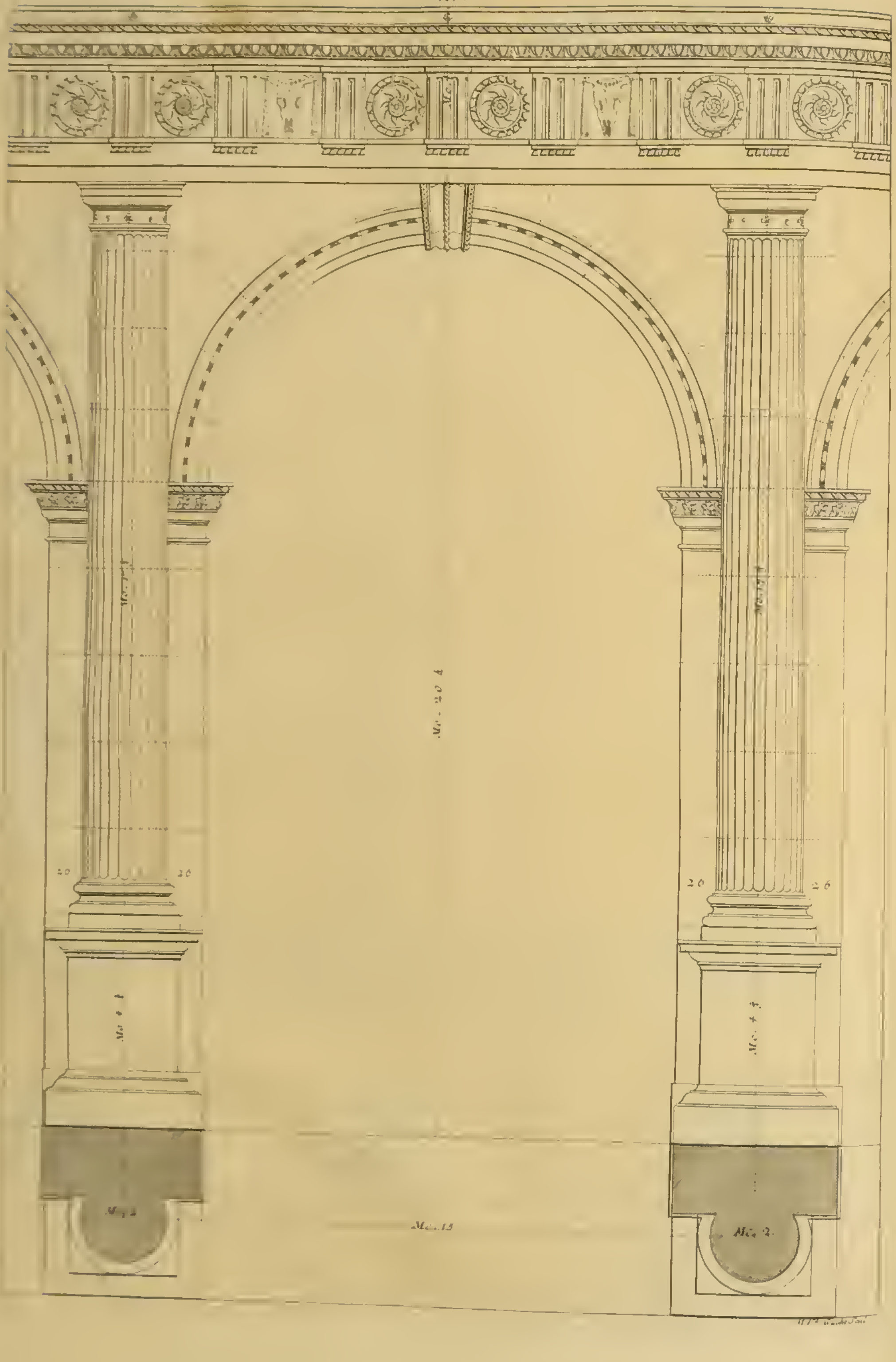
15

XIII

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Mi. 4 4
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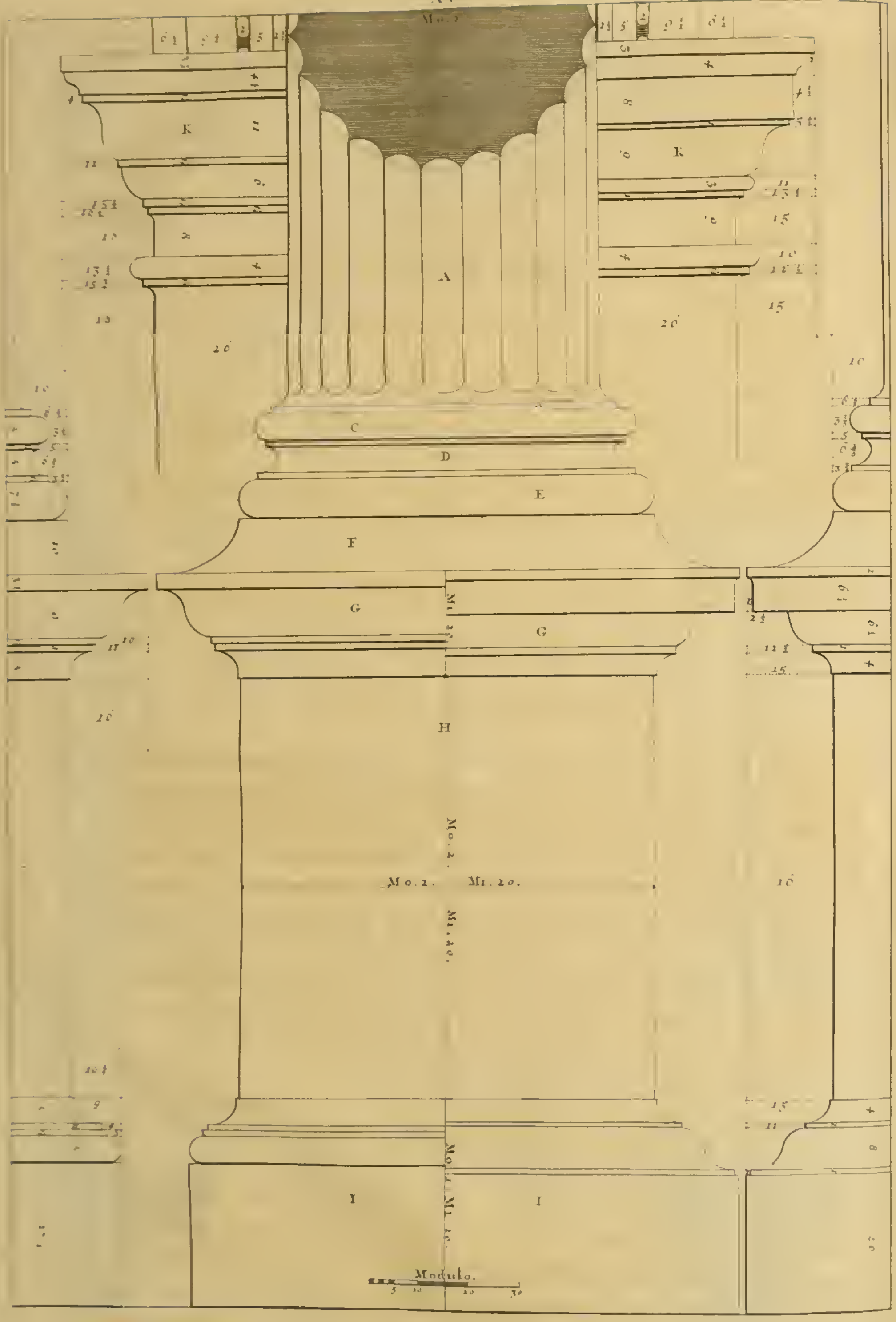
XV



C. *Cima recta.*
D. *Cavetto.*
E. *Frize.*
F. *Architrave.*
G. *Cimaſium.*
H. *Abacus.* } *of the Capitel.*
I. *Cima recta*
K. *Collarino*, or *Hypotrachilum*, or *Frize* of the Capitel.
L. *Aſtragal.*
M. *Body of the Column, towards the Capitel.*
N. *Body of the Column, towards the Baſis.*
O. *Annulet, Liſtella*, or *Cincture.*
P. *Torus*, or *Tore, in the form of a Cima reverſa* } *of the Baſis.*
Q. *Orlo*, or *Plinth.*

On the right hand of the profil'd *Architrave*, mark'd F, I have given the *Profil* of another more curiouſly done.

⁂

CHAP. XV

Of the DORICK *Order.*

THE *Dorick* * Order was invented by the *Dorians*, and nam'd from them; being a *Grecian* People, which dwelt in *Aſia.* If theſe Columns are made alone without Pilaſters, they ought to be ſeven and a half, or eight diameters high. The *Intercolumns* are to be a little leſs than three diameters of the Columns: and this manner of ſpacing the Columns, is (by *Vitruvius*) call'd *Diaſtylos.*

† But if they are join'd to Pilaſters, they muſt be, together with the *Baſis* and *Capitel*, ſeventeen *modules* and one third high; that is, eight diameters and 35 parts: for it muſt be obſerv'd, that as I have ſaid before in the 13th Chapter) the *module*, in this Order, is the half of the diameter of the column, divided into thirty parts; tho in all the other Orders, it is the whole diameter divided into 60 parts,

** Among the Antients there was no *Pedeſtl* to this Order, tho the modern Architects have adapted one to it. Therefore if one has a mind to join a *Pedeſtal*, the *Dado*, or *Dye* of it, muſt be a perfect ſquare, and from its meaſure thoſe of its Ornaments ſhall be taken: in order to this, the *Dye* is to be divided into three equal parts; the *baſis*, with its *ſocket* or *plinth*, ſhall take two of them, and the *Cimaſium* one; to which the *Orlo*, or *plinth* of the *baſis* of the Column muſt be join'd. This kind of *Pedeſtal* may be ſeen in the *Corinthian* Order, as at *Verona* in the Arch call'd the Arch *de Lioni.* I have ſet down here ſeveral manners of *profils*, which may be fitted to the *Pedeſtals* of this Order, which are all very agreeable, taken from antient pieces, and very carefully meaſur'd. This Order has no proper *baſis:* wherefore in many Buildings, its Columns are without a *baſis*, as in the Theatre of *Marcellus* in *Rome*, in the Temple *de la Pieta* near the ſaid Theatre: in the Theatre of *Vicenza*, and in divers other places. But ſometimes the *Attick baſis* is join'd to it, which is a great ornament to the Order, the proportion whereof is as follows. The height is the half diameter of the Column, and is divided into three equal parts: one is for the *Zocco* or *plinth:* The other two are ſubdivided into four parts, of one is made the *Torus ſuperior:* the three remaining are again ſubdivided into two, one for the *Torus inferior*, and the other for the *Scotia*, or *Cavetto*, with its *Annulets*, or *Liſtellas*; which have alſo their peculiar meaſures: for in dividing the whole into ſix parts, the two *Annulets*, or *Liſtellas* take each of them one, and the four remaining are for the *Scotia.* The whole projecture of the *baſis* muſt be the ſixth part of the diameter of the Column; the *Cincture* is as broad as half of the *Torus ſuperior:* if it be divided from the *baſis*, its *projecture* muſt be the third part of the whole *projecture* of the *baſis.* But if the *baſis* and a part of the Column muſt be of a piece, the *Cincture* muſt be ſmaller; as it may be ſeen in the third deſign of this Order, where I have alſo drawn two manners of *Impoſts* for Arches.

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* *Plate* XIII. † *Plate* XIV. ** *Plate* XV.

A. *The Body of the Column.*
B. *Annulet*, or *Cincture*, or *Liſtella.*
C. *Upper Torus.*
D. *Cavetto*, or *Scotia with its Annulets*, or *Liſtellas.*
E. *The lower Torus.*
F. *Zocco*, or *Plinth.*
G. *Cimaſium.* } *of the Pedeſtal.*
H. *Dado*, or *Dye*, or *Square* } *of the Pedeſtal.*
I. *Baſis.* } *of the Pedeſtal.*
K. *Impoſts of Arches.*

[*] The *Capitel* likewiſe ought to have in height the half diameter of the Column, which being divided into three principal

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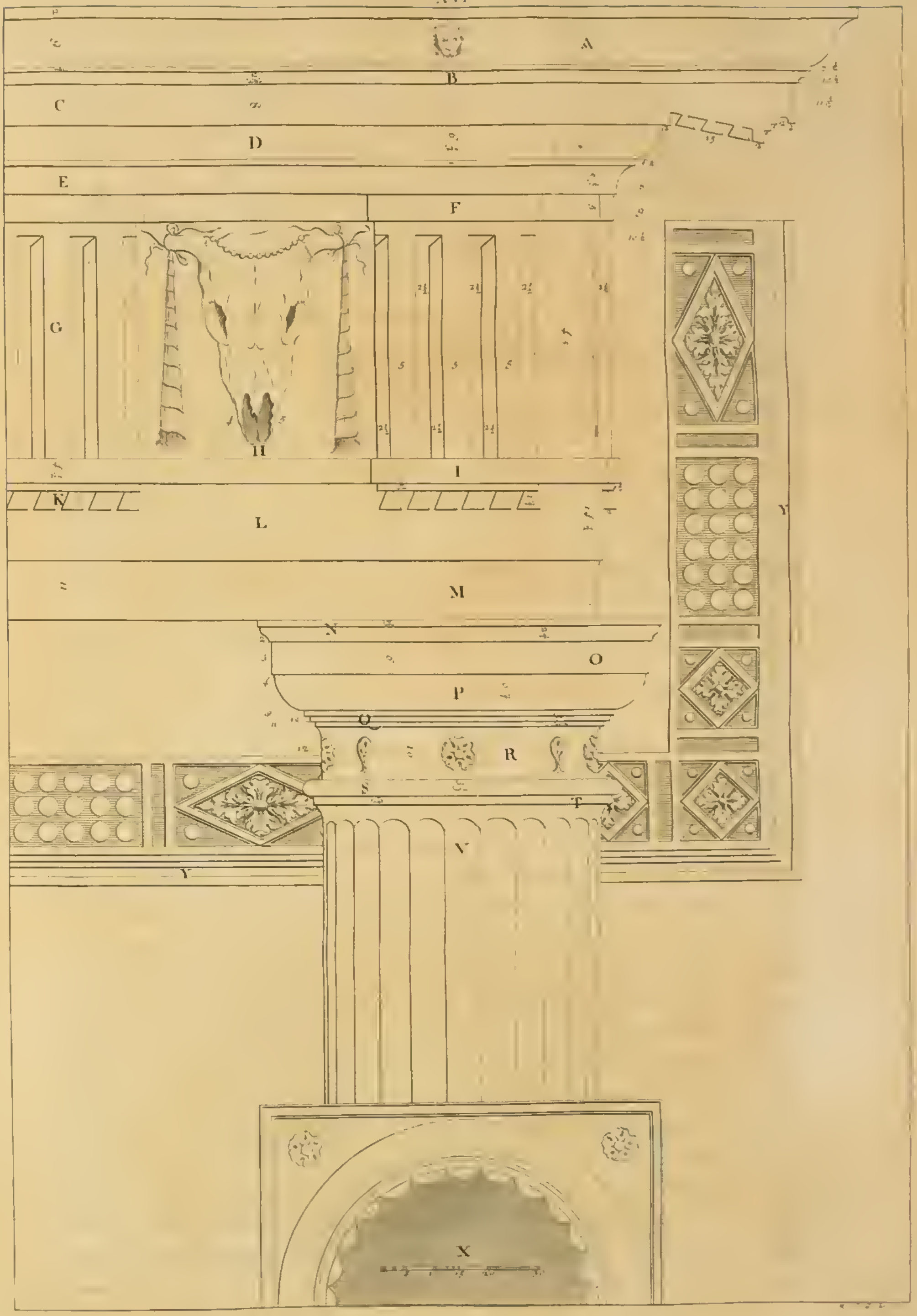
[*] *Plate* XVI.

parts,

XVI



parts, the firſt above is ſubdivided into five, three are for the *Abacus*, and the other two for the *Cimaſium*; which being again ſubdivided into three, the *Liſtella* takes one, and the *Cima recta* the other two. The ſecond principal part is divided into three, one of which is given to the three *Annulets*, or *Liſtellas*, that are equal; the other two are for the *Ovolo*, whoſe *projecture* is two thirds of its height. The third and laſt principal part, is for the *Frize* of the *Capitel*, call'd *Collarino*, or *Gorgerin*, or *Collar*. The whole *projecture* of the *Capitel* is the fifth part of the diameter of the Column. The *Aſtragal* is of the ſame height with the three *Filets*, or *Annulets*; and is equal in its *projecture* with the loweſt part of the Column. The *Annulet* is only half the height of the *Aſtragal*, and its *projecture* is *plum* with the Center of it.

The *Architrave* is plac'd upon the *Capitel*, and is to be in height a *module*, or half the diameter of the *Column*. 'Tis divided into ſeven parts, one of which makes the *Tenia*, whoſe *projecture* is equal to its height. The whole is again divided into 6 parts, one whereof is given to the *Guttæ*, and the *Liſtel*, under the *Tenia*. The *Guttæ* are ſix in number, and the height of the *Liſtel* is a third of the ſaid *Guttæ*. The whole, from the *Tenia* downwards, is again divided into ſeven parts, of which the firſt *faſcia* takes three, and the ſecond four.

The *Frize* is in height a *module* and a half. The breadth of the *Trigliph* is one *module*: and its *Capitel* takes up the ſixth part of a *module*. The *Trigliph* is divided into ſix parts, two whereof are given to the two *Chanels* in the middle, and one to the two half *Chanels* at the extremities: the other three make the ſpaces between the ſaid *Chanels*. The *Metopa*, that is to ſay, the ſpace between two *Trigliphs*, ought to be perfectly ſquare. The height of the *Cornice* is a *module* and a ſixth, and is divided into five parts and a half: of which two are for the *Cavetto*, with its *Liſtel*, and the *Ovolo*. The *Cavetto* is leſs than the *Ovolo*, by as much as its *Liſtel*. The other three and a half are allow'd for the *Corona*, or *Cornice*, and to the two *Cimas*, the *reverſa* and the *recta*. The *Corona* ought to project two thirds of a *module*, and to have on its *plain* underneath ſix *Guttæ* in length, and three in breadth with their *Liſtels* over the *Trigliphs*, and ſome *Roſes, or other Ornaments*, over the *Metopa*. The *Guttæ* are round, and in the ſhape of little *Bells*: thoſe under the *Corona* muſt anſwer to thoſe under the *Tenia*. The *Cimaſium* ought to be an eighth part larger than the *Corona*, and is divided into eight parts, two whereof are given to the *Liſtel*, and the other ſix to the *Cimaiſe*, whoſe *projecture* is ſeven parts and a half So that, at this rate, the *Architrave*, the *Frize* and *Cornice*, riſe to the height of the fourth part of the *Column*: and theſe are the proportions of the *Cornice* according to *Vitruvius*, from whom I have a little receded, by altering ſome Members of it, and making the whole ſomewhat larger.

A. *Cima recta.*
B. *Cima reverſa.*
C. *Corona.*
D. *Ovolo.*
E. *Cavetto.*
F. *The Capitel of the Trigliph.*
G. *Trigliph.*
H. *Metopa.*
I. *Tenia.*
K. *Guttæ.*
L. *Firſt Faſcia.*
M. *Second Faſcia.*
N. *Cimaſium.*
O. *Abacus.*
P. *Ovolo.*
Q. *Annulets*, or *Liſtellas.*
R. *Collar*, or *Friſe of the Capitel.*
S. *Aſtragal.*
T. *Liſtella*, or *Cincture.*
V. *Body of the Column.*
X. *The Plan of the Capitel, and the Module divided into thirty Minutes, or Parts.*
Y. *Soffita, or the underneath of the Corona.*

CHAP. XVI.

Of the IONICK *Order.*

THE * *Ionick* Order had its Original in *Ionia*, a Province of *Aſia*; and we read that the famous Temple of *Diana* at *Epheſus* was built of that Order. The Column with its *Capitel* and *Baſe*, is nine *modules* high: and by a *module* is underſtood, as we have ſaid before, the diameter of the Column below. The *Architrave, Frize*, or *Cornice*, have the fifth part of the height of the Column. When the Columns are ſingle, the *Inter-columns* are of two diameters and a fourth part, and this is the moſt beautiful and commodious manner of all *Inter-columns*, which *Vitruvius* calls *Euſtylos*.

† In the *Arches*, the *pilaſters* are in breadth a third part of the ſpace between two of them; and the Arch ought to be in height the double of the ſaid ſpace.

** If there is to be given a *pedeſtal* to the Column of the *Ionick* Order, as in any deſign of Arches, it muſt be made as high, as half

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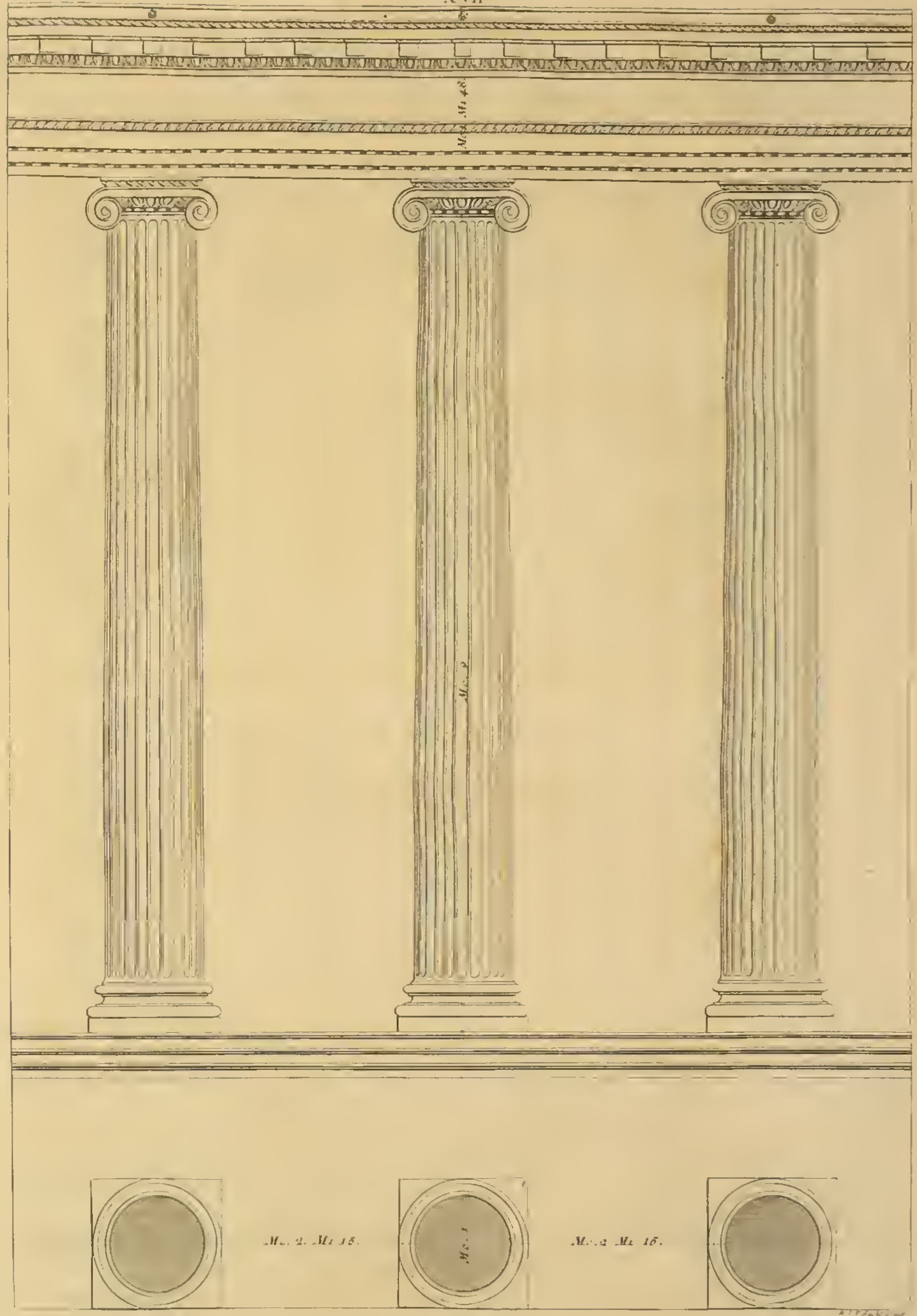
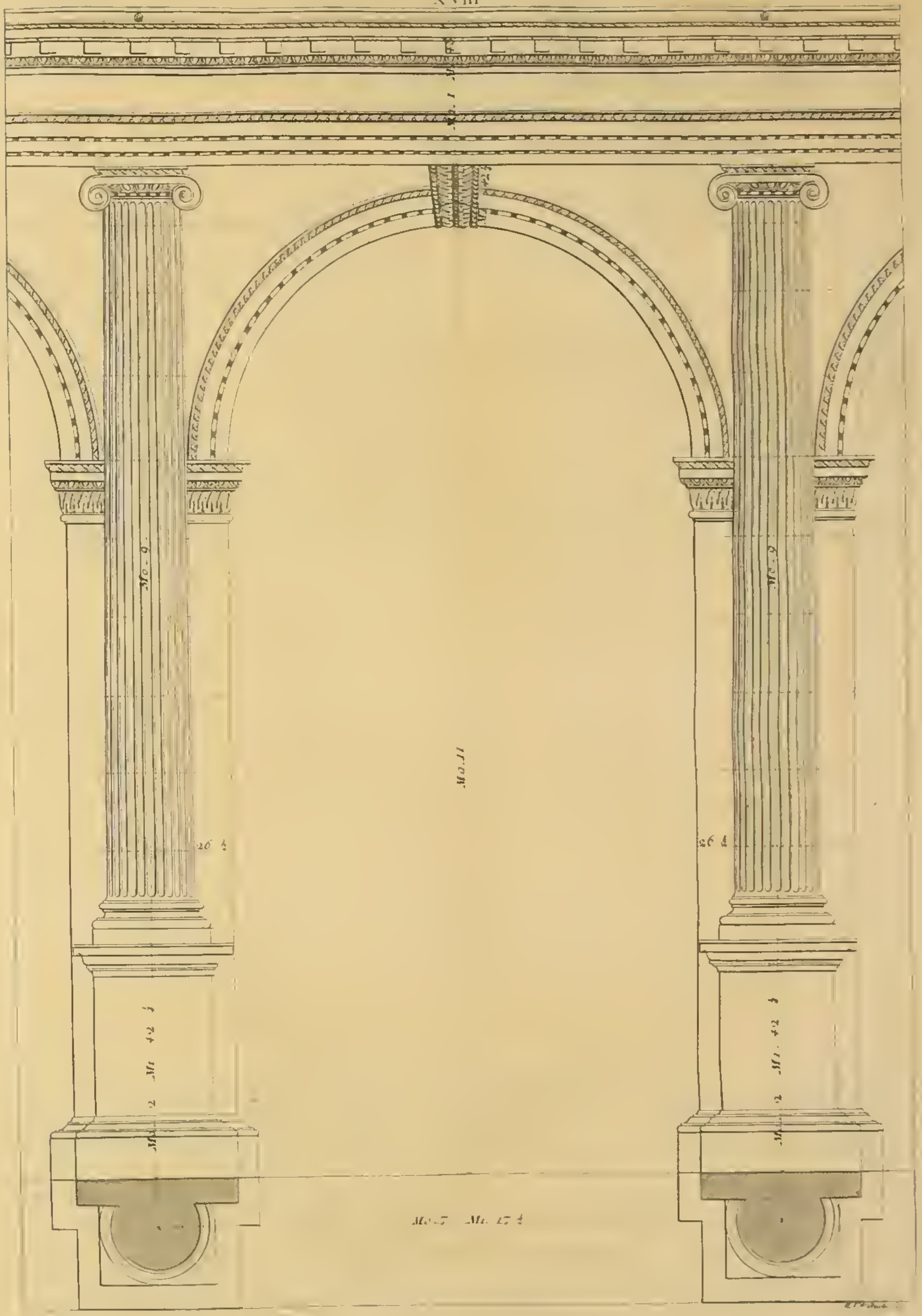
* *Plate* XVII. † *Plate* XVIII. ** *Plate* XIX.

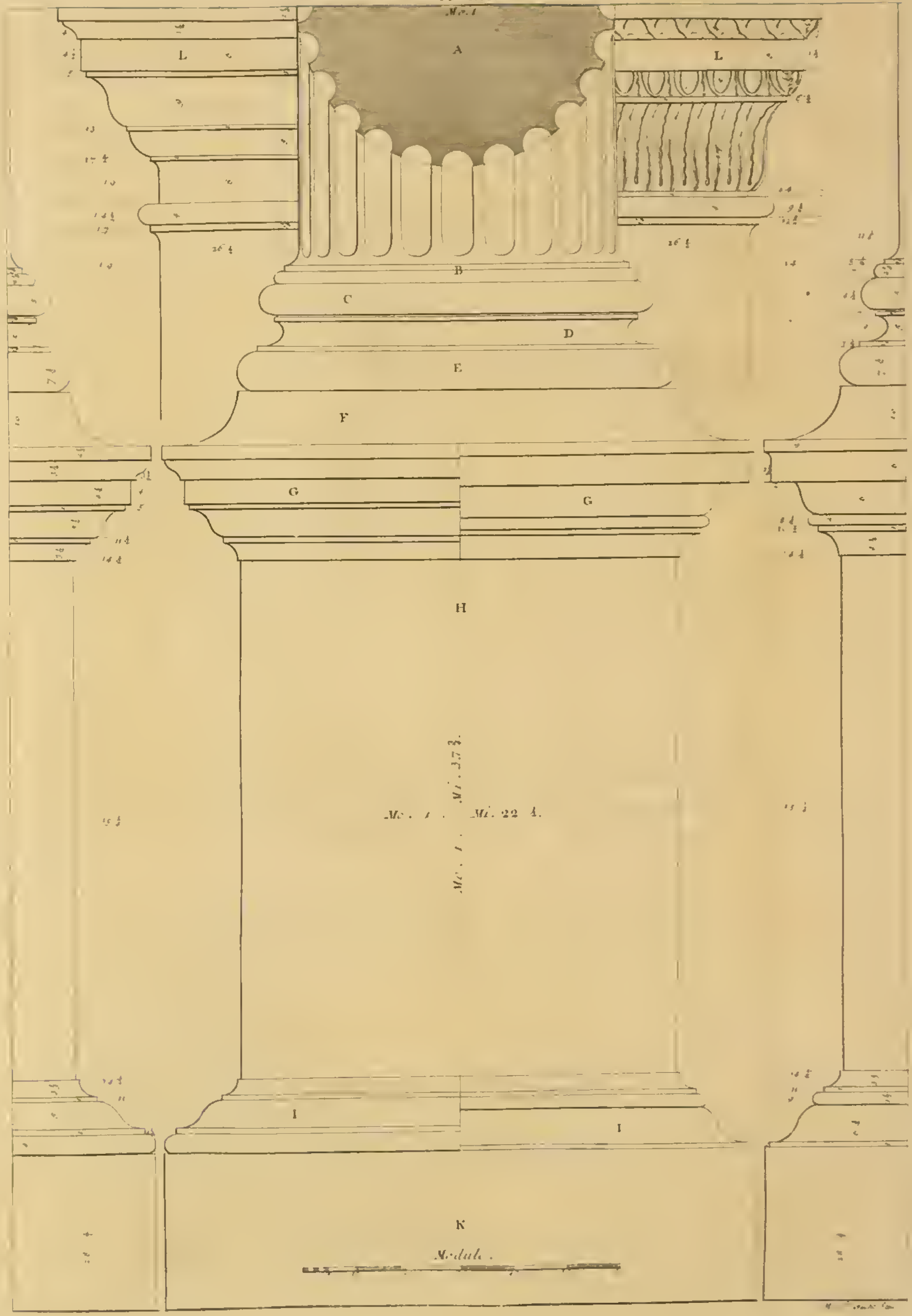
XVII



XVIII



XVIIII.



the breadth of the opening of the Arch: and having divided it into 7 parts and a half, two of them ſhall make the *Baſe* and one the *Cimaſium*; the other four and a half remaining ſhall be for the *Dado*, or *Square* of the *Pedeſtal*.

The *Baſe* of this Order is half a *module* height, and is divided into three parts: one is for the *Orlo*, or *Plinth*; whoſe *projecture* is the fourth part of its height, and conſequently the eighth part of a *module*: the two other parts of the *Baſe* are ſubdivided into ſeven; of three is made the *Torus*; the other four are divided again into two parts, one given to the *Scotia*, or *Cavetto* above, and the other to that below, which ought to have more *projecture* than the other. The *Aſtragal* muſt have the eighth part of the *Scotia*. The *Cincture* of the *Column*, is the third part of the *Torus* of the *Baſe*; but if the *baſe* be made a part of the Column, the ſaid *Cincture* may be made ſmaller, as I have already obſerv'd in the *Dorick* Order; and the *Cincture* has half of the *projecture* already mention'd. Theſe are the meaſures of the *Ionick baſe*, according to *Vitruvius*.

But becauſe the *Attick baſe* is put to this Order in many antient Buildings, and that it ſeems to me more agreeable upon a *Pedeſtal*, I have drawn the *Attick baſe* with a ſmall *Aſtragal* under the *Cincture*, not omitting, at the ſame time, to give the Deſign as *Vitruvius* teaches us.

The Deſigns mark'd L. are two different *profils* to make the *Impoſts* of Arches; and upon each of them the meaſures are ſet down by numbers which ſignify the *minutes*, or parts of a *module*, as I have done in all other Deſigns. Theſe *Impoſts* are in height half as much again, as the thickneſs of the *pilaſter*, which ſupports the Arch.

A. *Part of the Body of the Column.*
B. *Aſtragal with its Liſtella*, or *Cincture, which are Members of the Column.*
C. *The upper Torus.*
D. *Cavetto*, or *Scotia.*
E. *The lower Torus.*
F. *The Plinth faſtned to the Cimaſium of the pedeſtal.*
G. *Cimaſium in two forms*
H. *Dado*, or *Dye*, or *Square* } *of the pedeſtal.*
I. *Baſe in two forms*
K. *Orlo*, or *Plinth of the baſe.*
L. *Impoſts of the Arches.*

* In order to make the *Capitel*, the foot of the Column muſt be divided into 18 parts, and 19 of ſuch parts will be the length and breadth of the *Abacus*, the half of which is given to the height of the *Capitel* with its *Volutas*, whereby it comes to be 9 parts and a half high. One and a half is for the *Abacus* with its *Cimaſium*; the other eight remain to the *Voluta*, which is made in the following manner. From the extremity of the *Cimaſium*, one of the nineteen parts being taken within, from the point where that nineteenth part ends, a line is let fall *plum*, which divides the *Voluta* by the middle, and is call'd the *Catheta*. Where the point falls upon this line, which ſeparates the four parts and a half above, with the three and a half below, there is made the Center of the *Eye* of the *Voluta*, whoſe diameter is one of the eight parts of its height; and from the ſaid point a line is drawn, which *interſecting* at right Angles the *Catheta*, divides the *Voluta* into four parts. Next in the *Eye* of this *Voluta* a ſquare is form'd, the bigneſs whereof is the half diameter of the ſaid *Eye*: and two diagonal lines being drawn in it, upon them are mark'd thirteen points (computing the Center of the *Eye*) which are as many Centers whereon the fix'd foot of the Compaſs is to ſtand to make the *Voluta*; and as to the order which muſt be obſerv'd in them, it appears by the numbers mark'd in the Deſign. The *Aſtragal* of the Column is right againſt the *Eye* of the *Voluta*. The *Volutas* are as thick in the middle, as is the *projecture* of the *Ovolo*, which reaches beyond the *Abacus*, ſo much as does the *Eye* of the *Voluta*. The hollow, or *Channel* of the *Voluta*, is even with the body of the Column. The *Aſtragal* of the Column turns about under the *Voluta*, and is always viſible, as it appears by the *Plan*: for 'tis natural that ſo ſlender a thing as the *Voluta* is feign'd to be, ſhould give way to another ſtronger, as the *Aſtragal* is, from which it is always equally diſtant.

In the Angles of *Collonades*, or rows of Columns, and *Porticos* of the *Ionick* Order, *Capitels* are made with their *Volutas*, not only in the front, but alſo on that part which, making the *Capitel* as uſual, would have been the *Flank*; whereupon they come to have the front on two ſides, and are call'd *Angular-Capitels*. How they are to be made I ſhall teach in my Book of *Temples*, *i. e.* the 4th Book.

A. *Abacus.*
B *Channel, or hollow of the Voluta.*
C. *Ovolo.*

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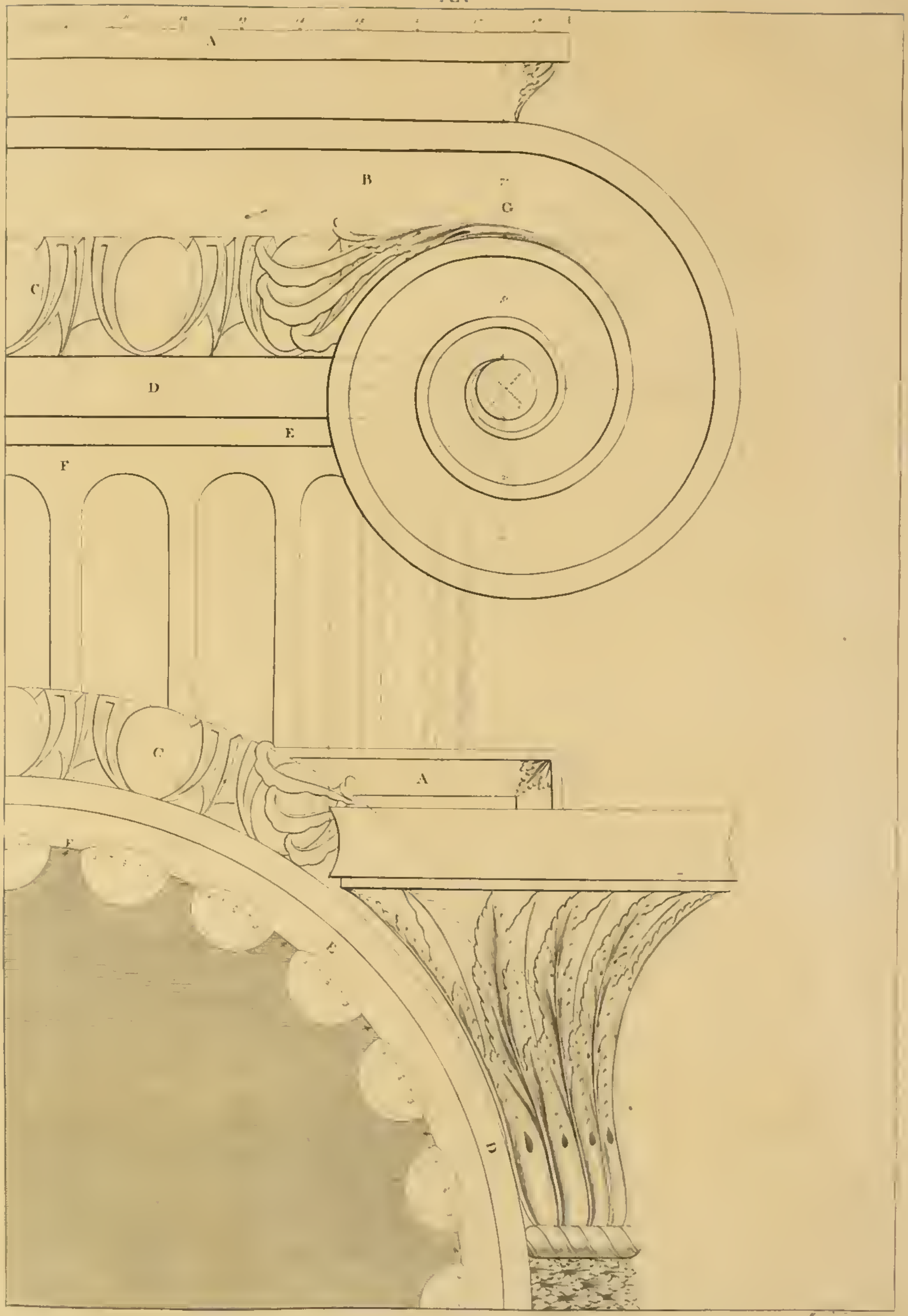
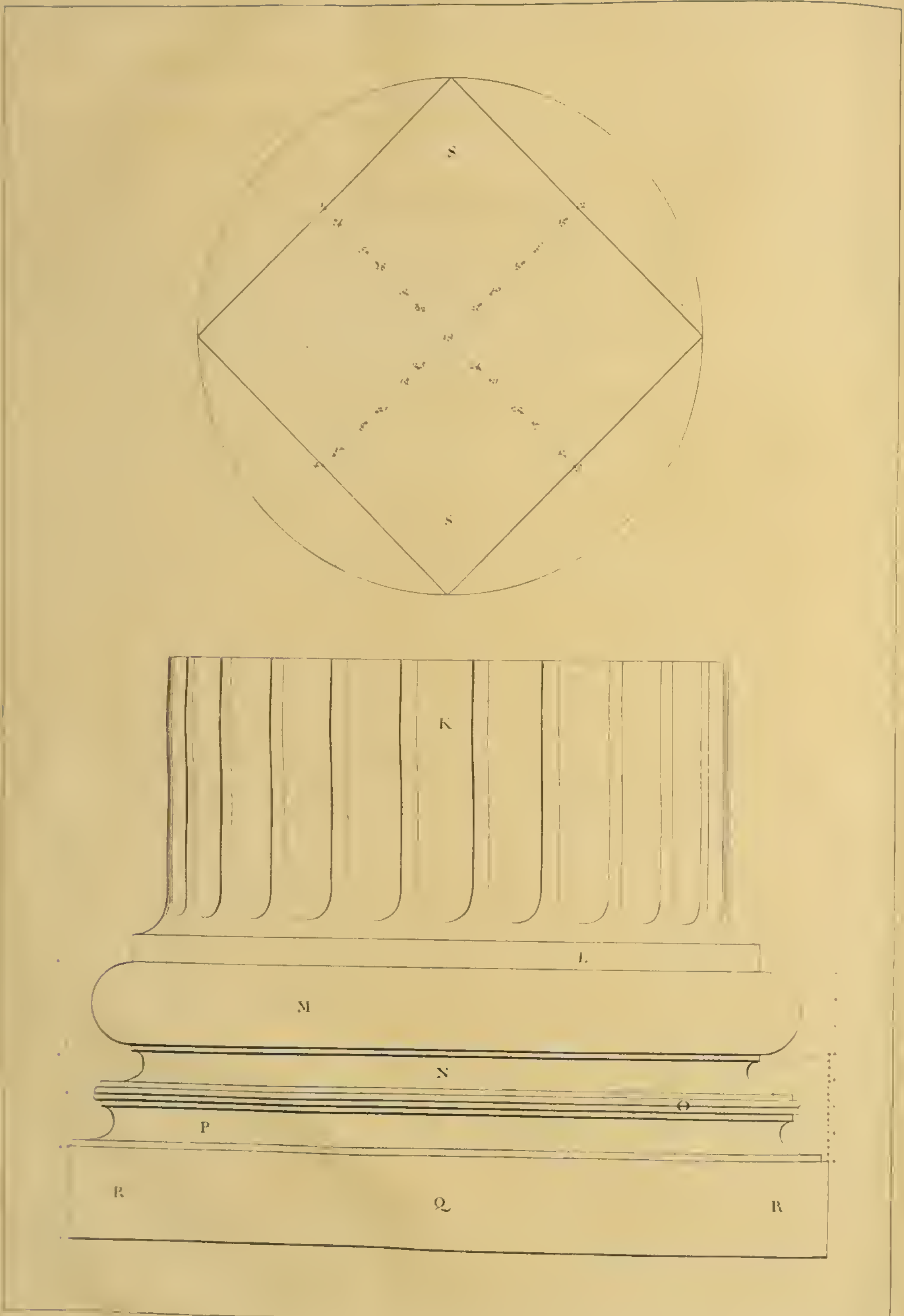
* *Plate* XX.

D. *Aſtra-*

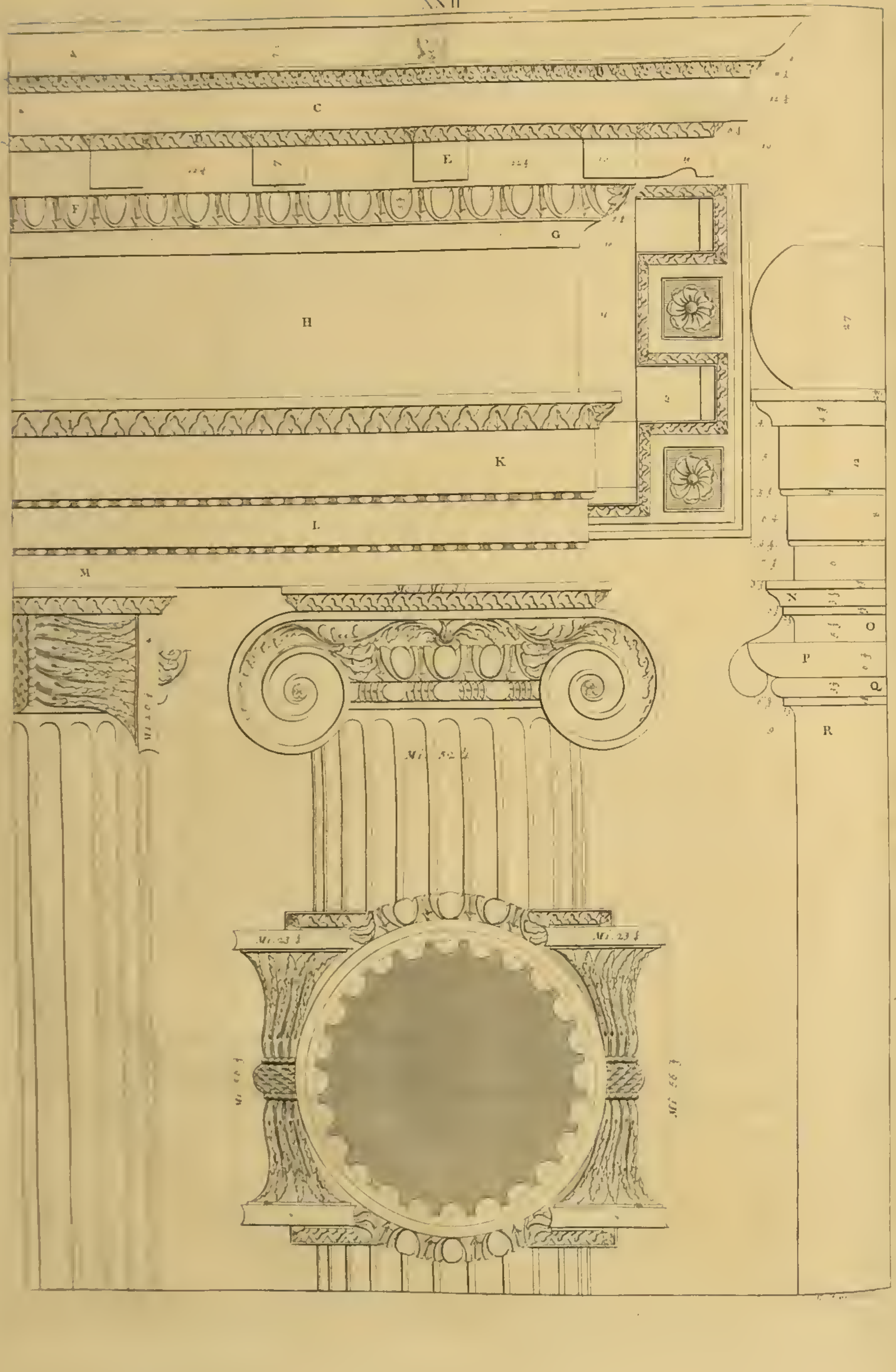
XX



XXI



XXII



D. *Aſtragal under the Echinus or Ovolo.*
E. *Cincture*, or *Annulet*, or *Liſtella.*
F. *Part of the Body of the Column.*
G. *A Line call'd Catheta.*

The Plate XXI. repreſents the *Ionick* Baſe according to *Vitruvius*, together with the *Eye* of the *Voluta* upon a large Scale, marked S.

Members of the *Baſe* according to *Vitruvius.*

K. *Part of the Body of the Column.*
L. *Cincture, or Annulet.*
M. *Torus.*
N. *Firſt Scotia.*
O. *Aſtragal.*
P. *Second Scotia.*
Q. *Orlo*, or *Plinth.*
R. *Projecture of the Baſe.*

* The *Architrave*, *Frize* and *Cornice* have, as I ſaid before, the fifth part of the height of the Column; and the whole is divided into 12 parts. *The Architrave* has four, the *Frize* three, and the *Cornice* five. The *Architrave* is ſubdivided into five parts; of one is made its *Cimaſium*, and the reſt is ſubdivided again into twelve: for the firſt *Faſcia* and its *Aſtragal* three, to the ſecond and its *Aſtragal* four, and to the third five.

The *Cornice* is divided into $7\frac{3}{4}$ parts; two are given to the *Scotia*, or *Cavetto* and *Ovolo*; two to the *Modilions*, and the reſt to the *Corona* and *Cimaſium.* The whole *Cornice* projects as much as its height.

I have drawn the *Front*, the *Flank*, and the *Plan* of the *Capitel*; and the *Architrave*, *Frize* and *Cornice*, with their proper Ornaments.

A. *Cimaſium*, or *Cima recta.*
B. *Cima reverſa.*
C. *Corona.*
D. *Cimaſium of the Modilions.*
E. *Modilions.*
F. *Ovolo.*
G. *Cavetto.*
H. *Frize.*
I. *Cimaſium of the Architrave.*
K. *Firſt Faſcia.*
L. *Second Faſcia.*
M. *Third Faſcia.*

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* *Plate* XXII.

Members of the *Capitel.*

N. *Abacus.*
O. *Channel, or hollow of the Voluta.*
P. *Ovolo, or Echinus.*
Q. *Aſtragal of the Column.*
R. *Part of the Body of the Column.*

The *Plan* mark'd S, repreſents the *Soffite*, or the underneath of the *Corona* between each *Modilion.*

CHAP. XVII.

Of the CORINTHIAN *Order.*

[*] AT *Corinth*, a moſt famous City of *Peloponneſus*, now the *Morea*, was invented the Order from thence call'd *Corinthian*, and which is more gentile, rich, and beautiful, than any of thoſe I have yet diſcours'd upon. The Columns are like thoſe of the *Ionick* Order; and, with the *Baſe* and *Capitel*, they are nine *Modules* and a half high. If they are *fluted* they muſt have 24 *Flutes* or *Channels*, which are to be half as deep as they are broad. The *Plans*, or *Spaces*, between one *Flute* and the other, muſt be a third part of the breadth of the ſaid *Flutes*. The *Architrave*, *Frize*, and *Cornice*, are a fifth part of the height of the Columns. In the deſign of a *Colonnade*, or ſingle Columns, the *Inter-columns* are two diameters, as in the *Portico* of St. *Maria Rotunda* at *Rome*; and this manner of *diſtancing* the Columns is, by *Vitruvius*, call'd *Syſtylos*.

[†] In that of *Arches*, the *Pilaſters* have two fifths of the breadth of the *Arch*, which breadth or void is in height two ſquares and a half, the thickneſs of the ſaid *Arch* being comprehended.

[**] The *Pedeſtal* under the *Corinthian* Column, muſt have in height the fourth part of the length of the Column, and being divided into eight parts, one is given to the *Cimaſium*, two to the *Baſe*, and five to the *Dye* or *Square*. The *Baſe* muſt be divided into three parts, two for the *Zocco*, or *Plinth*; and one to the *Moulding*.

The common *Baſe* of this Column is the *Attick*; but yet it differs from that which is put to the *Dorick* Order; for in this the *projecture* is the fifth part of the diameter of the Column; *whereas in the Dorick it is the ſixth part.* It may alſo vary in ſome other

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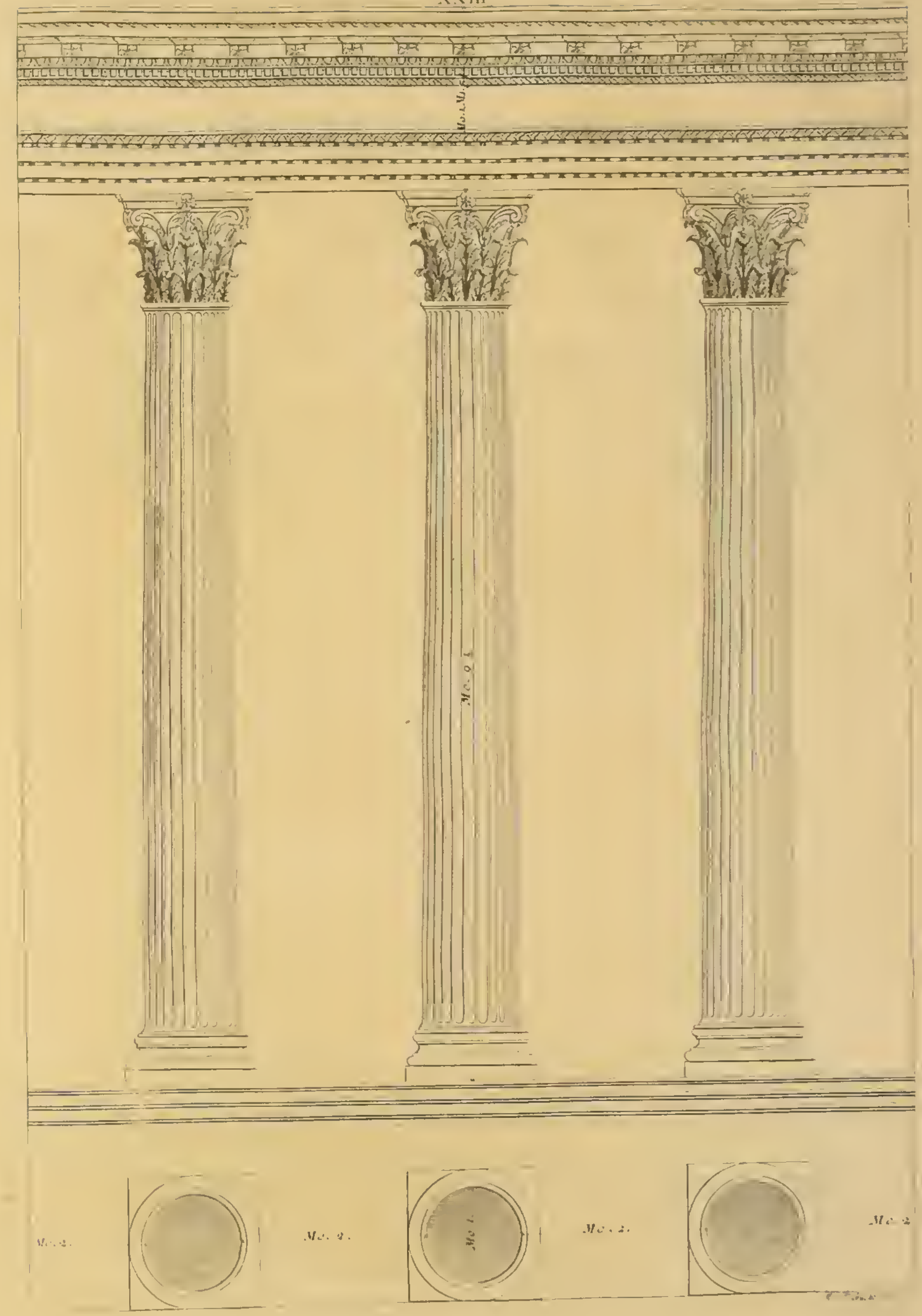
[*] *Plate* XXIII. [†] *Plate* XXIV. [**] *Plate* XXV.

parts,

XXIII



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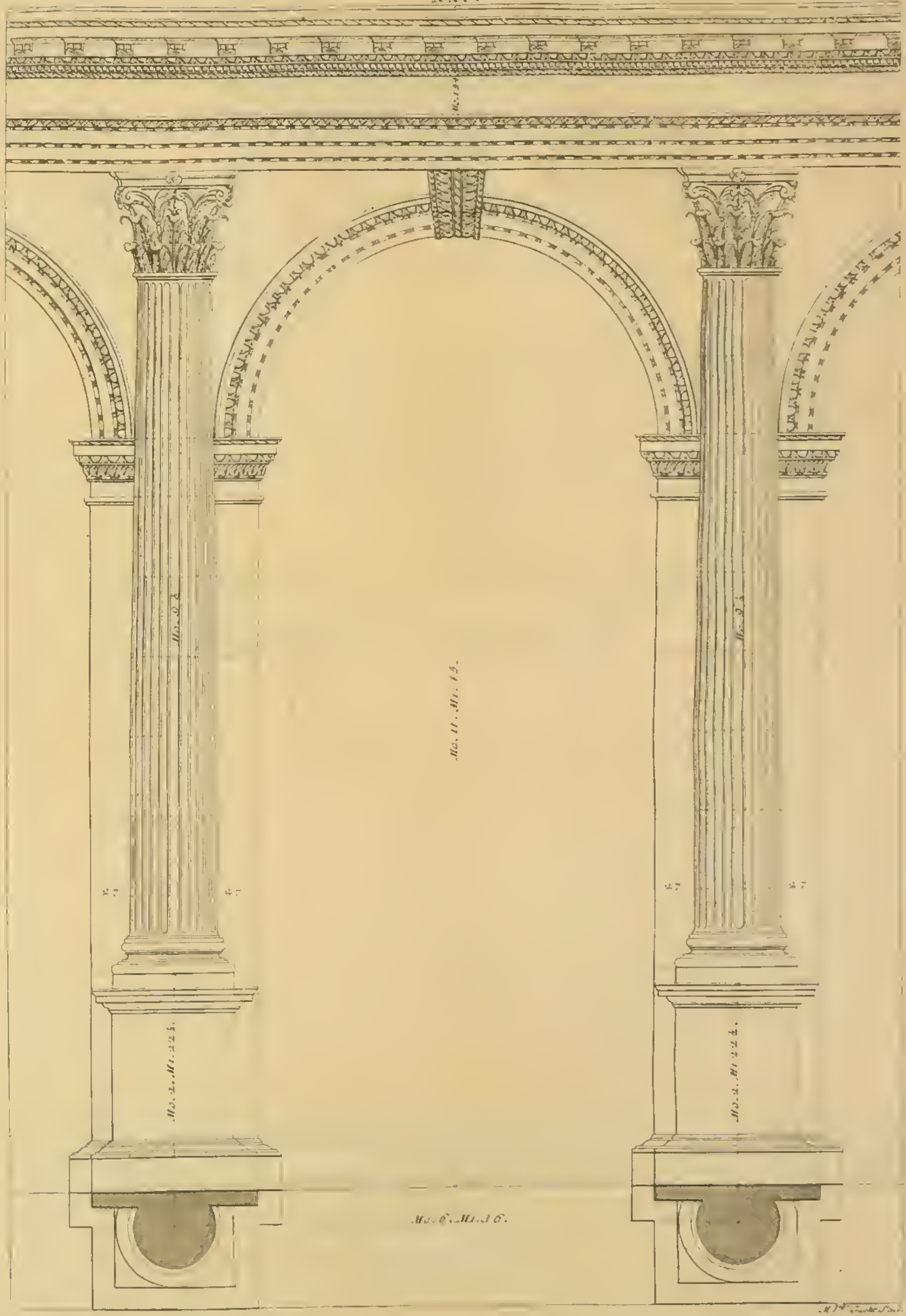
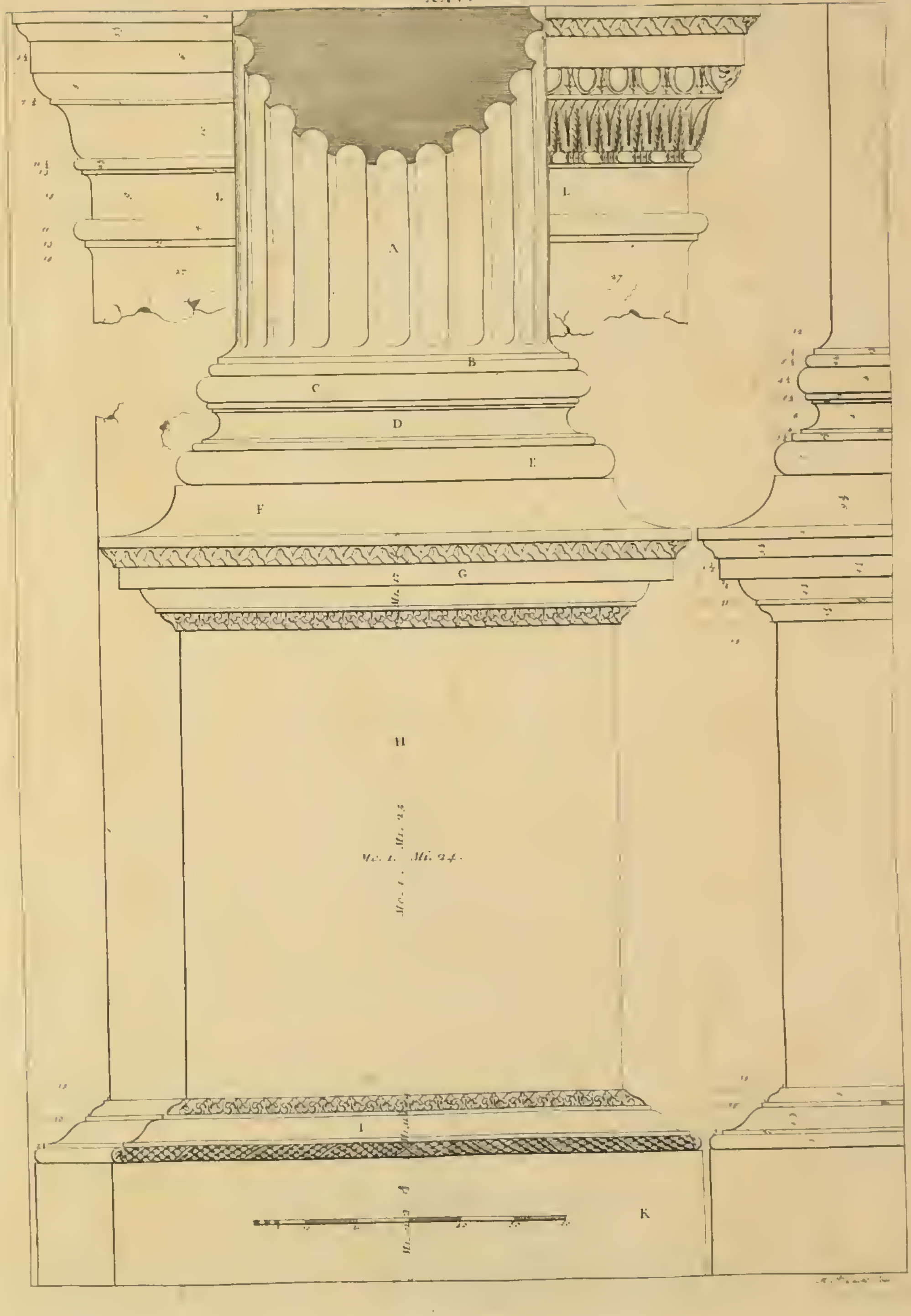
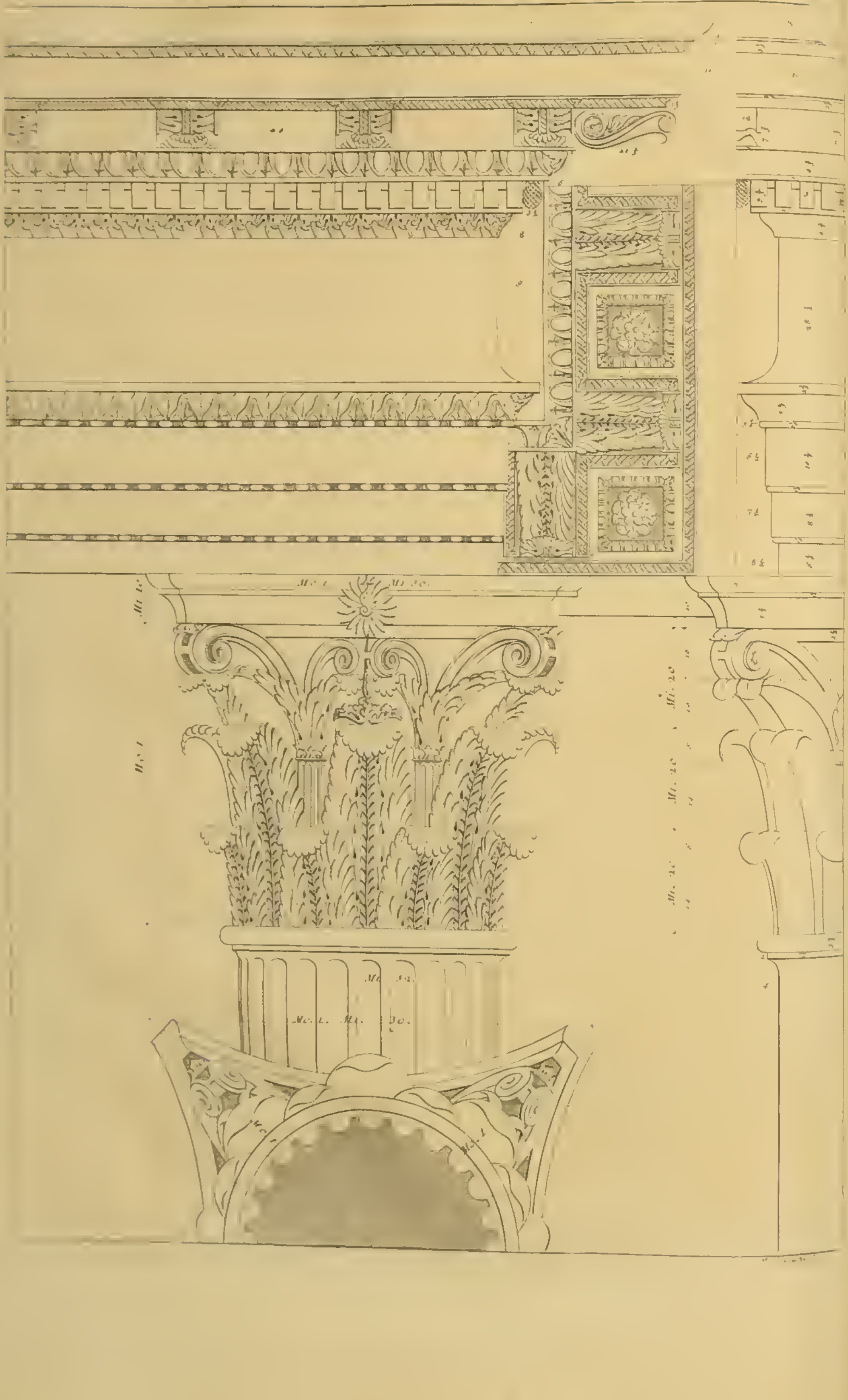


XXV.




Mi. 1
Mi. 30
Mi. 20
Mi. 1
Mi. 30

parts, as it appears by the Deſign, where I have *profil'd* the *Impoſts* of the Arches, the height of which is double of the *Membretto*, or *Half-pilaſter* which bears up the *Arch*.

A. *Part of the Column.*
B. *Cincture, or Aſtragal of the Column.*
C. *Upper Torus.*
D. *Cavetto,* or *Scotia, with its Aſtragals.*
E. *Lower Torus.*
F. *Orlo, or Plinth of the Baſe, join'd to the Cimaſium of the Pedeſtal.*
G *Cimaſium*
H. *Dado,* or *Dye,* or *Square*
I. *Moulding of the Baſe* } *of the Pedeſtal.*
K. *Orlo, or Plinth of the Baſe*
L. *The Impoſt of the Arch.*

* The height of the *Corinthian Capitel* takes a diameter of the Column below, and a ſixth part more, which is allow'd to the *Abacus*. The reſt is divided into three equal parts. One is for the lowermoſt row of *Leaves*, the other for the middle row; but the third is ſubdivided into two, and of that part next to the *Abacus* are made the *Cauliculi*, or *Stalks*, with their *Leaves*, which ſeem to be ſupported by them; and therefore the *Stalk* from whence they grow, muſt be made thick, but they in their *foldings* muſt diminiſh by degrees; following in that Example of the Plants, which are thicker at the bottom than at the extremities of their Branches. The *Bell* which is the inward body of the *Capitel* under the *Leaves*, ought to be *plum* with the bottom of the *Flutes* of the Column. To give the *Abacus* a convenient *projecture*, a perfect ſquare muſt be made, each ſide whereof is to be a *module* and a half, and the diagonal lines being drawn from one angle of it to another, the point of their interſection in the middle, is the center of the ſaid ſquare; on which the fix'd foot of the Compaſs being plac'd, towards each Angle of the ſquare a *module* muſt be mark'd, where lines muſt be drawn interſecting at right Angles with the ſaid diagonal Lines, that they may touch the ſides of the Square. Theſe are the bounds of the *projecture* of the *Abacus*, the length of the ſaid Lines, giving the breadth of its *Horns*. The *Curvilineal-ſide*, or diminution of the *Abacus* is made, by drawing a circular line from one horn to the other, which will be the *Baſe* of an *equilateral* triangle. Then a ſtrait line is drawn from the extremities of the ſaid *horns* to the extre-

mities of the *Aſtragal* of the Column, which Line the *Tongues* of the *Leaves* muſt ſeem to touch, or rather paſs a little outwards, and ſo they have a full *projecture*. The *Roſe* is to be as broad as the fourth part of the diameter of the Column at the foot. The *Architrave*, *Frize* and *Cornice* (as I have ſaid before) are to be a fifth part of the height of the Column, and the whole is to be divided into 12 parts, as in the *Ionick* Column: with this difference however, that the *Cornice* of the *Corinthian* is divided into eight parts and a half, one of which is given to the *Cima reverſa*, and another to the *Denticuli*, the third to the *Ovolo*, the fourth and fifth to the *Modilions*, and the other three and a half to the *Corona* and *Cima*. The *Cornice* has as much *projecture* as it has height. The *Pannels* of the *Roſes*, between the *Modilions*, muſt be ſquare; and the *Modilions* as big as half the *Plan* of the ſaid *Roſes*. The Members of this Order have not been mark'd with Letters, as the foregoing, becauſe by them theſe may be eaſily underſtood.

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* *Plate* XXVI.

CHAP. XVIII.

Of the COMPOSITE *Order*.

*THE *Compoſite* Order (which is alſo nam'd *Roman*, as being an Invention of the antient *Romans*) is ſo call'd, becauſe it partakes of all the aforeſaid Orders; and the moſt regular and beautiful is that which is compounded of the *Ionick* and *Corinthian*. It is more ſlender than the *Corinthian*, and may be made like it in all its parts, except in the *Capitel*.

The Columns ought to be 10 *Modules* high. In the Deſigns of Columns, or ſingle *Collonades*, the *Inter-columns* are but of one diameter and a half: and in this manner is call'd by *Vitruvius*, *Picnoſtylos*.

† In thoſe of *Arches*, the *pilaſters* are to be half of the breadth, or void of the *Arch*, which is to be under the *Keyſtone* two *ſquares* and a half high; that is to ſay, two diameters and a half of the *Arch*.

** And becauſe (as I have ſaid) this Order is more ſlender than the *Corinthian*, its *Pedeſtal* muſt be the third part of the height of the Column; which being divided into eight parts and a half, of one part is made the *Cimaſium* of the ſaid *Baſe*, five and a

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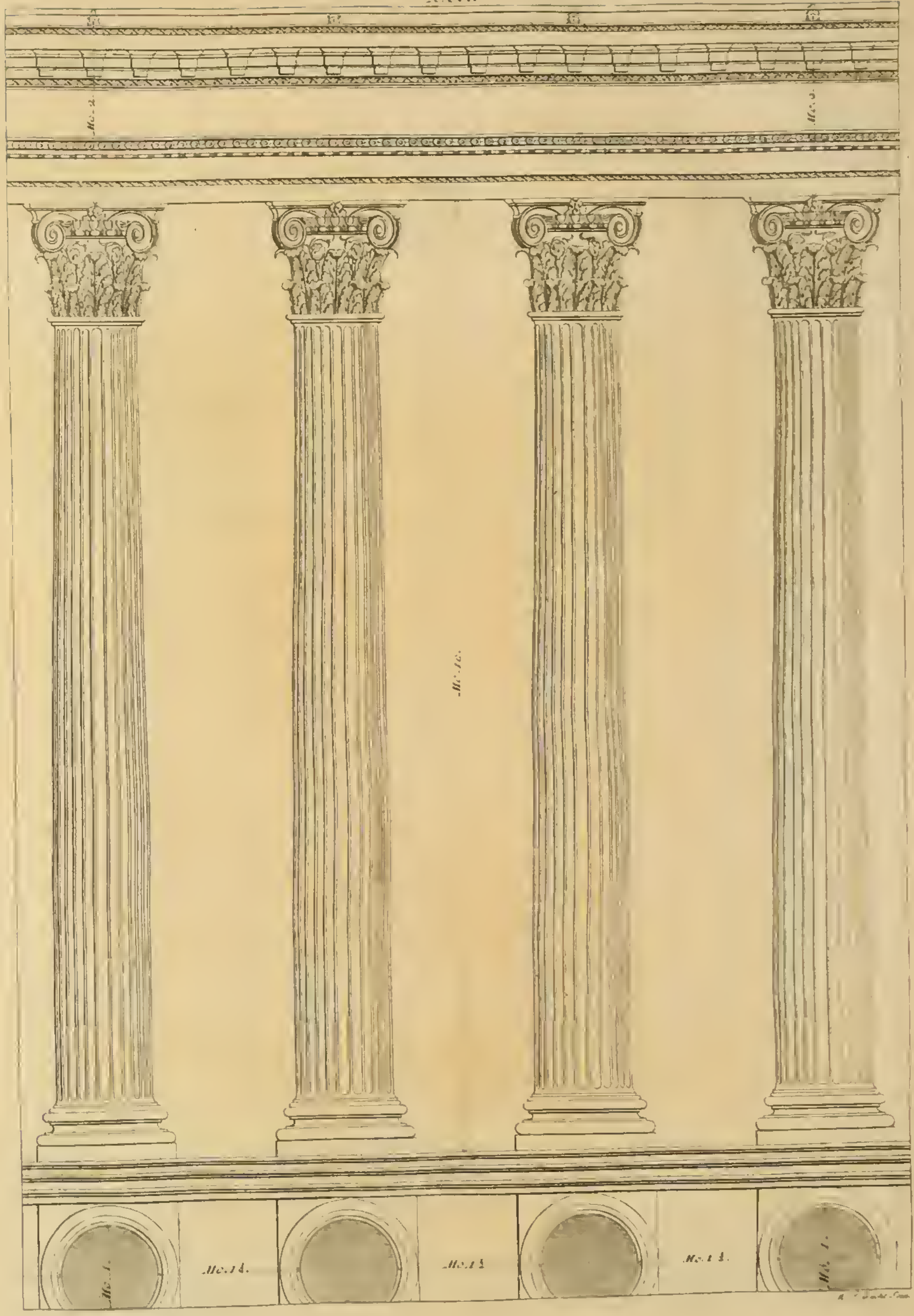
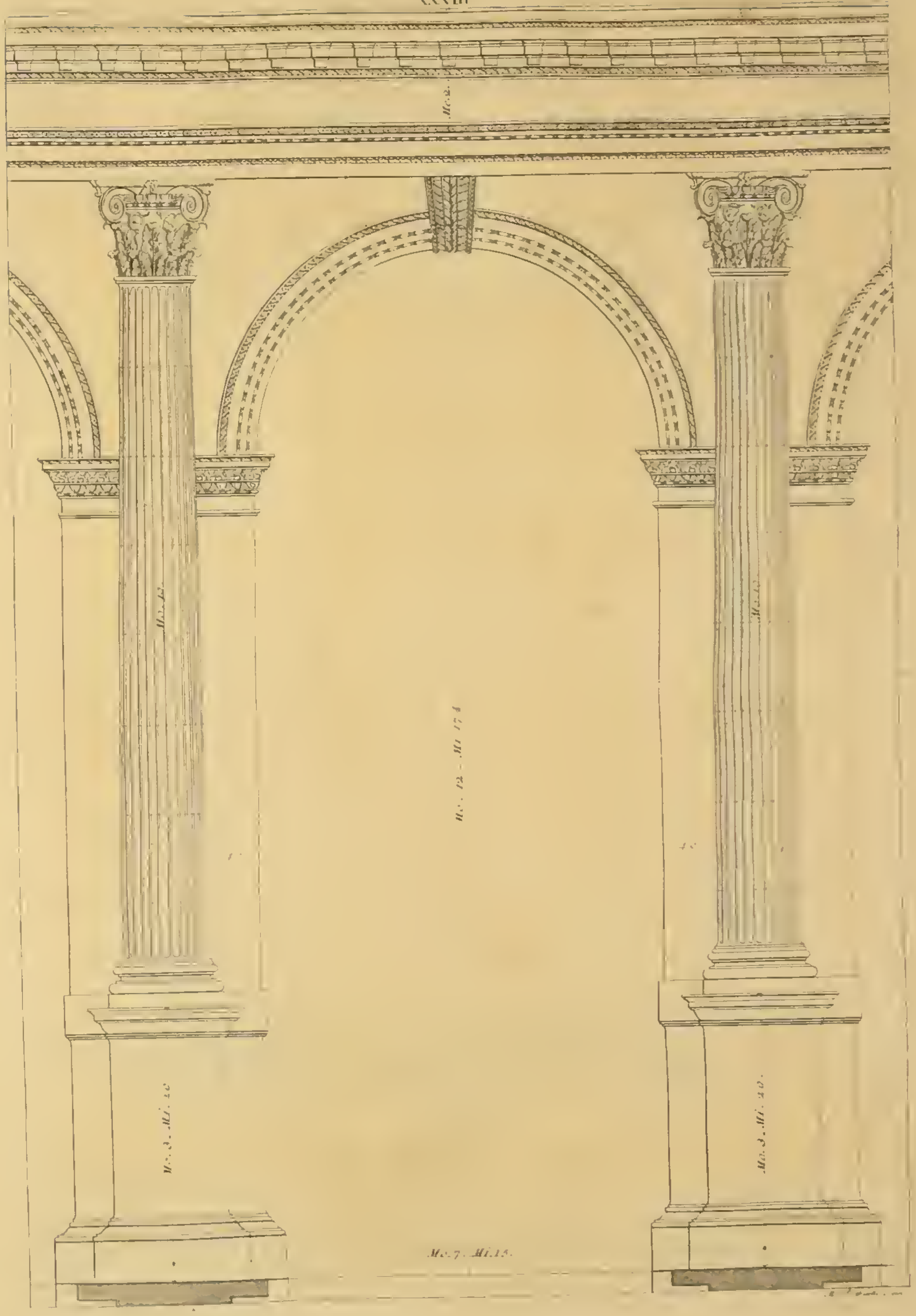
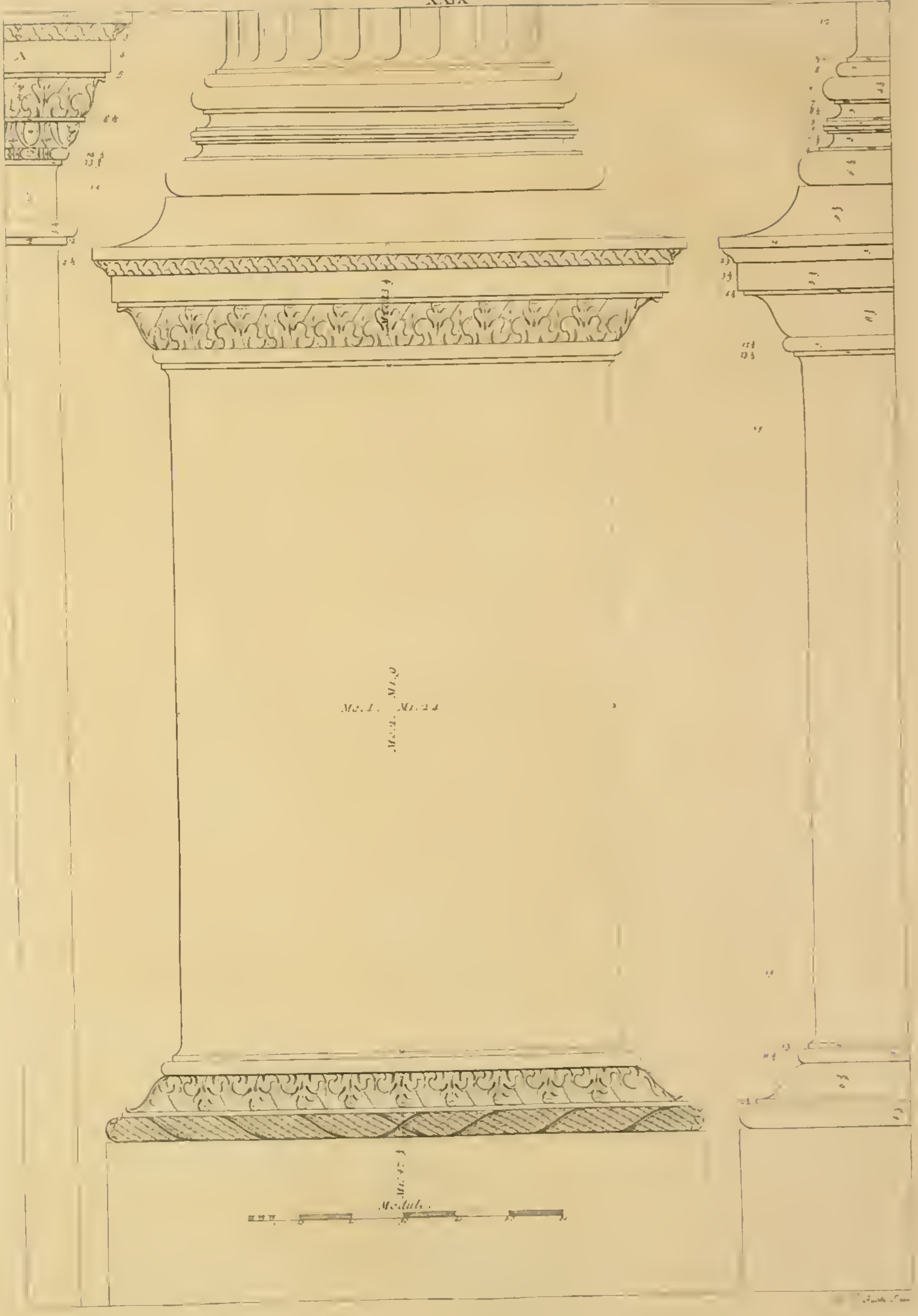
* *Plate* XXVII. † *Plate* XXVIII. * *Plate* XXIX.

XXVII



XXVIII

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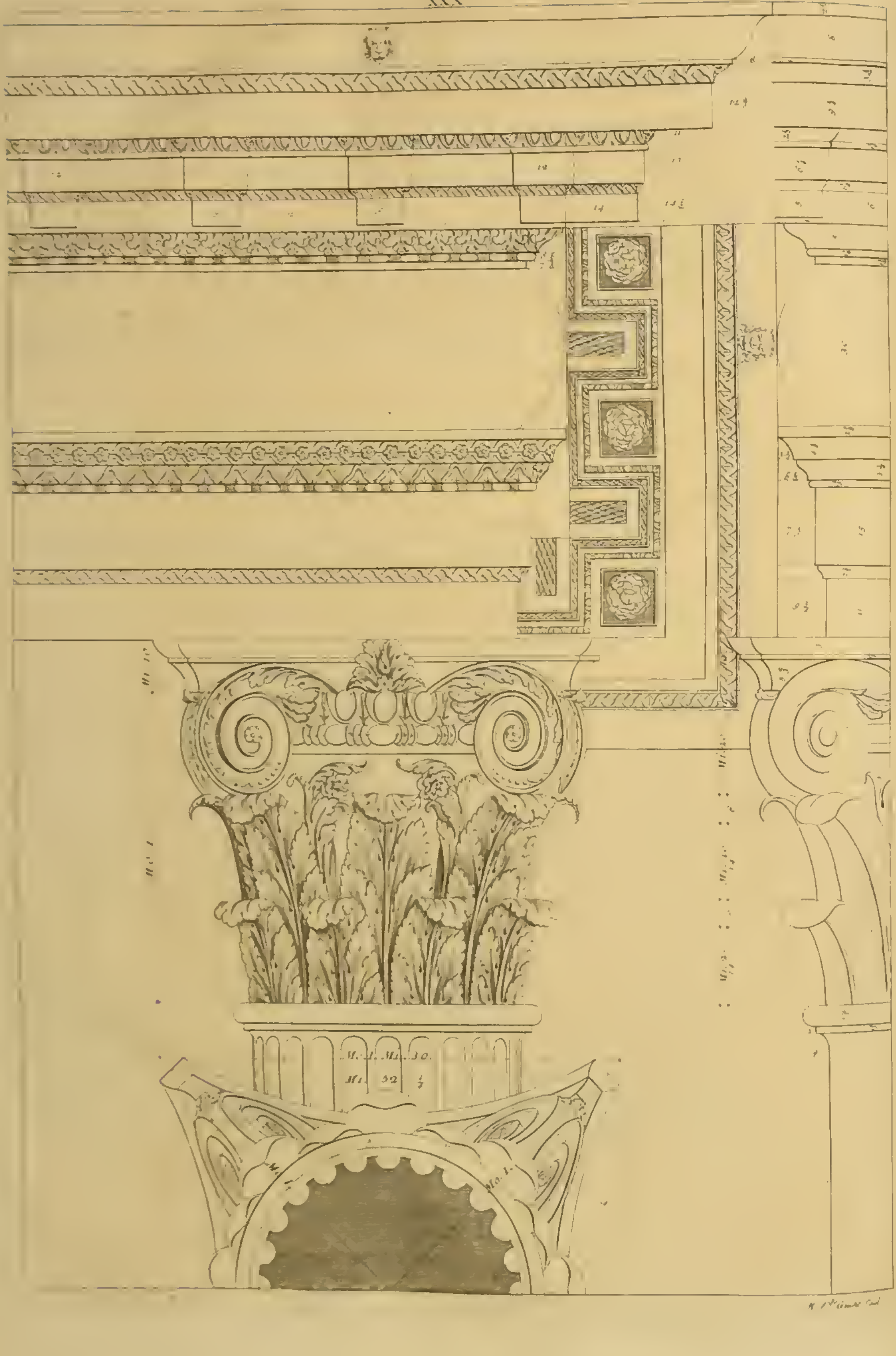
XXX



H. Le Comte Sculp.

half for the *Dado*; the two others for the *Baſe*, which being ſubdivided into three, two will make the *Zocco*, or *Plinth*; and the third for the *Torus* and *Cima*.

The *Baſe* of the Column may be made *Attick*, as in the *Corinthian*; and it may be alſo compounded of the *Attick* and the *Ionick*, as appears by the Deſign.

The *Impoſts* of the Arches are profil'd by the ſide of the *Pedeſtal*; and its height is equal to the diameter of the *Membretto*, or *half Pilaſter*.

A. *Impoſt of the Arch.*

* The *Capitel* of the *Compoſite* Order has the ſame meaſures as that of the *Corinthian*; but it differs from it in the *Voluta*, *Ovolo*, and *Fuſarolo*, or *Fuſe*, which are Members of the *Ionick Capitel*. The way of making it is thus. From the *Abacus* downward, the *Capitel* is divided into three parts, as in the *Corinthian*. The firſt is given to the firſt row of *Leaves*, the ſecond and the third to the *Voluta*, which is made in the ſame manner, and with the ſame points as that of the *Ionick*. It takes up ſo much of the *Abacus*, that it ſeems to go out of the *Ovolo*, at the foot of the *Flower* which is put in the middle of the circular ſide of the *Abacus*; and it is as thick in the front, as the breadth of the *Horns* thereof, and a little more. The *Ovolo* is as big as three parts of five of the *Abacus*, and its lower part, that is its *Fuſe*, ought to be parallel with the *Eye* of the *Voluta*. It has in its *projecture* $\frac{3}{4}$ of its height, and is with its *projecture*, perpendicular to the hollow of the *Abacus*, or a little more outwards. The *Fuſe* is a third part of the height of the *Ovolo*, and has in its *projecture* ſomething more than the half of its thickneſs. It turns about the *Capitel* under the *Voluta*, and is always ſeen. The *Liſtel*, which is under the *Fuſe*, and makes the edges of the *Bell* of the *Capitel*, is the half of the *Fuſe*. The body of the *Bell* ought to be *plum* with the bottom of the *Flutes* of the Column. I have ſeen one of this ſort at *Rome*, from which I have drawn all theſe meaſures, becauſe it appear'd to me very beautiful and well contriv'd.

There are *Capitels* to be ſeen made after another manner, and which may be call'd Compoſite; of which I propoſe to ſpeak, and to inſert the Deſigns of them in my Book of *Antiquities*. The *Architrave*, *Frize*, and *Cornice*, have the fifth part of the height of the Column; and it will be very eaſy to know their different diviſion, or diſtribution, by that which has been ſaid before in the other Orders, and by the Numbers I have plac'd in the Deſigns.

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* *Plate* XXV.

CHAP. XIX.

Of PEDESTALS.

HITHERTO I have diſcours'd, as much as to me ſeem'd neceſſary to be known, concerning ſimple Walls and their Ornaments; and in particular I have touch'd upon the *Pedeſtals*, which may be applied to every Order. But becauſe it appears that the Antients have not had this regard to make the *Pedeſtals* bigger for one Order than for another, altho this part much adds to the beauty and ornament of the work, when it is made with diſcretion and due proportion to the other parts: to the end nevertheleſs, that the Architects may get a full knowledge of theſe, and make a right uſe of them upon occaſion, they muſt take notice that the Antients made them ſometimes ſquare, that is to ſay as long as broad, as may be ſeen in the *Arch* call'd *di Lioni* at *Verona*; and theſe I have aſſign'd to the *Dorick* Order, becauſe it requires more ſolidity. Sometimes they took their meaſure in making of them from the diameter of the void of the *Arch*, as in the *Arch* of *Titus* at *Sancta Maria Nova* at *Rome*, and that of *Trajan* over the Gate of *Ancona*, where the Pedeſtal is half the height of the opening of the *Arch*; and of this kind of Pedeſtals I have put to the *Ionick* Order. Sometimes they took their meaſure from the height of the Column, as is ſeen at *Suſa*, a City ſituated at the foot of the Mountains which divide *Italy* from *France*, in an *Arch* erected to the honour of *Auguſtus Cæſar*: and in the *Arch* of *Pola*, a City of *Dalmatia*, and alſo in the Amphitheatre of *Rome* in the *Ionick* and *Corinthian* Orders: in which Buildings the Pedeſtal is the fourth part of the height of the Column, as I have made it in the *Corinthian* Order. In *Verona*, in the *Arch* call'd *di Caſtel vecchio*, which is very beautiful, the Pedeſtal is a third of the height of the Column, as I have order'd it in the *Compoſite* Order. All theſe forms of Pedeſtals are moſt beautiful, and have moſt elegant proportions with the other parts to which they belong. And when *Vitruvius*, diſcourſing of Theatres, makes mention of the *Poggio*, one muſt know, that by that word he means the Pedeſtal to which he gives the third part of the Columns with which he adorns the Scenes. But of Pedeſtals which exceed a third part of the Column, we have an Example at *Rome* in the *Arch* of *Conſtantine*, where the

Pedeſtals have one of two parts and a half of the height of the Column. And almoſt in all the antient Pedeſtals 'tis to be obſerv'd, that the Baſes have the double of the *Cimaſium*, as I ſhall demonſtrate in my Book of *Arches*.

CHAP. XX.

Of the Errors and Abuſes introduc'd into Architecture.

HAVING ſet down all thoſe Ornaments of *Architecture* which conſiſt in the right uſe of the five Orders, and having ſhewn how they ought to be made by drawing the *Profils* of each of their parts, according as I found that the Antients did practiſe; it ſeems to me not unfit here, to inform the Reader of many abuſes, which having been formerly introduc'd by *Barbarians*, are obſerv'd even to this day; and this I do to the end, that the Studious in this Art may avoid them in their own Works, and be able to take notice of them in thoſe of others. I ſay then, that *Architecture* (as all the other Arts) being grounded upon Rules taken from the imitation of Nature, admits of nothing that is contrary, or foreign to that Order which Nature has preſcrib'd to all things. Wherefore we ſee that the Antient Architects, who begun to alter their Timber-Buildings, and to make them with Stones, kept their Columns leſs at the top than at the foot, taking example from Trees, all which are leſs at the top than in the Trunk, and towards the Roots: likewiſe, becauſe it is very natural that thoſe things upon which any great weight is laid, ſhould be preſs'd, under the Column they did put a *Baſe*, which by its *Torus*, *Cavetto*, and *Aſtragal*, ſeems to repreſent a ſwelling caus'd by the burden over it. So they brought in the *Cornices*, *Trigliphs*, *Modilions*, and Dentils, to repreſent the heads of the Joyſts, which in the Ceiling are plac'd to bear up the Roof. The ſame may be obſerv'd in all other parts, if one is curious to examine them. And this being ſo, what ſhall we ſay of that form of Building, which is ſo contrary to what Nature has taught us, that it deviates from that Simplicity which is viſible in things by her produc'd, and departs from all that is good, or true, or agreeable in the way of Building: for which reaſon, inſtead of Columns, or Pilaſters, which are contriv'd to bear a great weight, one ought not to place thoſe Modern Ornaments call'd *Cartooſhes*,

tooſhes, which are certain *Scroles* that are but an eye-ſore to the Artiſts, and give others only a confuſed Idea of *Architecture*, without any pleaſure or ſatisfaction; nor indeed do they produce any other effect than to increaſe the Expences of the Builder. For the ſame reaſon theſe *Cartooſhes* ought never to come out of the *Cornice*; for it is requiſite that all the Members of it ſhould be made to ſome end, and to ſhow what it would be, if all the work had been fram'd of Timber. Beſides that, as it is requiſite to uphold a great weight with ſomething ſolid, and fit to ſupport it: ſo ſuch non-ſenſical things, as *Cartooſhes*, are altogether ſuperfluous, becauſe it is impoſſible that the Joyſts, or any other Timber whatſoever, could really perform what theſe repreſent; and ſince they are feign'd to be ſoft and weak, I know not by what rule they can be put under any thing heavy and hard. But of all Abuſes, in my opinion the moſt intolerable is, the making certain frontons of Doors, or Windows, or Galleries, divided in the middle: becauſe theſe frontons were contriv'd at firſt to defend thoſe parts from Rain, neceſſity having taught our firſt Architects to give them the form of a Roof; ſo that I know nothing more contrary to natural Reaſon, than to divide and open that part which the Antients did make whole, in order to defend the Inhabitants of the Houſe, and thoſe that enter into the ſame, from Rain, Snow, Hail, and other injuries of the Air: and altho variety and novelty ſhould pleaſe all, yet we are not to go againſt the precepts of Art, and that which Reaſon demonſtrates; whence we ſee that the Antients in their ſeveral Contrivances have never departed from the general and neceſſary Rules of Art or Nature, as may be ſeen in my Book of *Antiquities*. As for the *projecture* of the *Cornice*, and other Ornaments, 'tis not a ſmall abuſe to make it too great; becauſe when theſe Projectures exceed their juſt meaſure, eſpecially if the Building is in a cloſe place, it appears the narrower and more uncomely, as well as always frightning thoſe which ſtand underneath, as if it would fall upon them. One ought alſo carefully to avoid making the *Cornice* diſproportionable to the Columns; for 'tis certain that putting great *Cornices* upon little Columns, or upon great Columns little *Cornices*, muſt needs make a very ſad Aſpect. Again, thoſe ſorts of Columns, which are feign'd to be made of ſeveral pieces, and jointed together by the means of certain *Rings*, or *Annulets*, in the form of a Ruſtick, ought alſo to be no leſs carefully avoided; becauſe how much the more entire and ſtrong the Columns appear, ſo much the more they perform the deſign for which they are plac'd, which is to render the Work above more ſecure and firm. Many other the like abuſes might be reckon'd up, as of ſome Members which in the *Cornices* are made diſproportionable to the reſt, as by what I have ſhewn before, and by what is now ſaid, may be eaſily known. It remains now to come to the diſpoſing of the particular and principal parts of a Building.

CHAP. XXI.

Of Galleries, Entries, Halls, Antichambers, Chambers, and of their ſeveral proportions.

GALLERIES are commonly made in the fore, or back Front of a Houſe; or if only one is intended, it muſt be in the middle: if two, they are to be plac'd in the Wings. They ſerve for many uſes, as walking, eating, and other diverſions. They are made larger or leſſer, according to the greatneſs and conveniency of the Building; but ordinarily they ought not to have leſs than 10, nor more than 20 Foot in breadth. Beſides this, every well order'd Houſe ought to have in the middle, or chief part, ſome place with which all the other parts of the Houſe may have an eaſy Communication. Thoſe places in the ground Story are vulgarly call'd *Entries*, *Lobbies*, or *Paſſages*; and above they are *Halls*. They ſerve in a Houſe as publick places. The Entries ſerve for thoſe who attend, or wait on the Maſter to ſalute him, or to do any buſineſs with him. Such places are the parts of the Houſe (beſides the Galleries) that firſt preſent themſelves to thoſe that are about to enter the ſame. The Halls ſerve for all ſorts of ceremonial Feaſts, as Weddings, Banquets, Comedies, and ſuch other Paſtimes. For this reaſon, therefore, theſe places ought to be made much more ſpacious than others, to the end that many Perſons may commodiouſly be entertain'd therein, and eaſily ſee what's a doing. I do obſerve always to allow for the length of a Hall, no more than the double of its breadth; but the nearer they come to a Square, the more beautiful and convenient they will be.

The Anti-chambers and Chambers ought to be ſo divided and diſpos'd, that they may fall on each ſide of the Entry and of the Hall, taking care that thoſe on the right hand may exactly anſwer to thoſe on the left; that ſo not only one ſide of the Building be in all things equal to the other, but that the Walls likewiſe may bear equally the Burden of the Roof: becauſe if the Chambers were on one ſide larger than on the other, this (conſidering the cloſeneſs of the Walls) would bear more of the weight; and the other, being proportionably weaker, would occaſion many inconveniencies, and in proceſs of time the ruin of the whole Fabrick.

The handſomeſt and moſt elegant proportion for Chambers, and which have the beſt effect, may be taken ſeven different ways: for they may be made round (which form is very little in uſe) or ſquare, or they have in length the Diagonal of their ſquare, or a third more than the ſquare, or a ſquare and a half, or a ſquare and two thirds, or two ſquares full.

C H A P. XXII.

Of FLOORS *and* CIELINGS.

AFTER having ſpoken of the forms of Galleries, Halls, Anti-Chambers, and Chambers, 'tis neceſſary to ſay ſomething of Floors and flat Cielings. The ſuperficies of the Floors may be made out of Mortar, as uſual in *Venice*, or of ſquare Tyles, or of hard Stone. Thoſe of Mortar or Plaſter are very good, when made out of beaten *Cement* and fine Sand, or with River-Pebbles, or *Padoua* Stone-lime; all well mixt together. Such Floors muſt be made during the Spring, or Summer, that they may dry the better. Brick, or Square Tyle-Pavements are more agreeable to the Eye, becauſe of the many forms into which they may be made, and of the colours they are capable to receive by the divers colours of the Earth they are made with. The Floors of Bed-chambers, or other much frequented Rooms, are ſeldom made of Marble, or any hard Stone, becauſe in the Winter they would be too cold; but in Galleries, or other publick Places, they will agree well enough.

Care muſt be taken, that all the Rooms which are of the ſame Story, may have their Floor or Pavement equal, and in ſuch a manner that the very Threſholds of the Doors may not be higher than the reſt. And if any little Room or Cloſet ſhould happen to be lower than the reſt, what is wanting muſt be ſupplied by a *Mezanine*, or falſe floor-Cieling.

The Cielings are alſo made divers ways, for ſome delight to have handſome and well wrought Joyſts; in which caſe it is neceſſary to obſerve, that the Joyſts be diſtant one from another the thickneſs of a Joyſt and a half: becauſe ſuch a diſtribution will make the Ceiling very handſome, and between the ends of every Joyſt, there will be ſufficient Wall to bear the upper Story: whereas if they ſhould ſtand wider one from the other, it would look ill, and if cloſer, 'twould be like a dividing of the upper Wall from the lower; and the Joyſts rotting at the end, or being conſum'd by Fire, the Wall above muſt fall of courſe. Others will have Compartements of *Stuc* (*which is a ſort of hard Plaſter*) or of Flanks, that they may inrich them with Pictures, beautifying them according to their various Humours and Fancies; and therefore in this point there can be given no determinate Rules.

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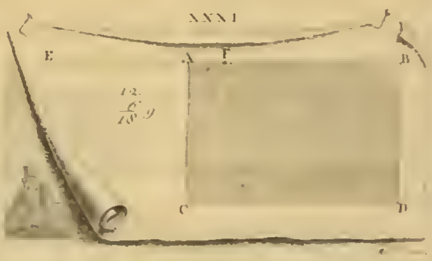
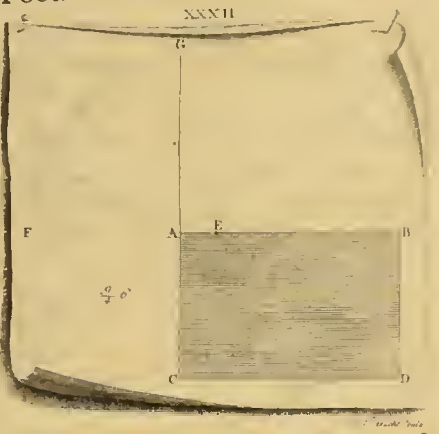
CHAP. XXIII.

Of the height of CHAMBERS.

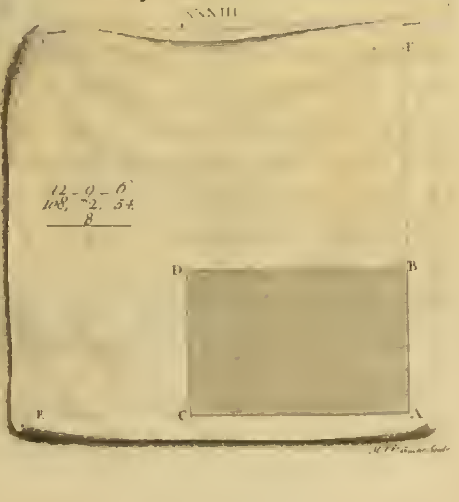
CHAMBERS are made either arch'd, or with a flat Cieling. If the laſt way, the height from the Pavement or Floor to the Joyſts above, ought to be equal to their breadth: and the Chambers of the ſecond Story muſt be a ſixth part leſs than them in height. As to the Rooms which are arch'd (and which are commonly made ſo in the firſt Story, not only becauſe they are more beautiful, but alſo leſs ſubject to Fire) their height in a ſquare Room is a third more than their breadth: but in thoſe, whoſe length exceeds their breadth, a height proportional to the length and breadth together may be eaſily found, by joining both the two Lines of the length and breadth into



into one Line, which being divided by the middle, the one half will give exactly the height of the *Arch.* As for Example, let B C be the place where an arc'd Room is to be made; joining the breadth A C with the length A B, and the Line E B being divided into two equal parts in the point F, 'tis plain that F B is the height requir'd. Or if the Room to be arch'd is 12 Foot long, by 6 wide, theſe two numbers join'd together, give 18, the half of which is 9, and therefore the height of ſuch a Room muſt be 9 Foot.



Another proportional height to the length and breadth of a Room, may be found in this manner. B C being the Room to be arch'd, the length and breadth ſhall be join'd upon one Line as B F; on the middle of which having mark'd the point C, it will be the Center of the Semi-circle B G F, and in prolonging the Line A C till it touches the Circumference at the point G, the Line A G will be the height of the Arch B C. That ſame proportion is to be found by numbers in this manner: knowing how many Foot are contain'd in the length and breadth of the Room, we muſt find a number which has the ſame relation of proportion with the breadth, as the length has with it, by multiplying the leſs extreme by the greateſt; because the *ſquare Root* of the product of that multiplication ſhall be the height demanded. As for Example, if the place to be arch'd is 9 Foot long and 4 Foot wide, the height of the Arch ſhall be 6 Foot, for the proportion from 9 to 6, is the ſame as from 6 to 4, *viz.* the *ſeſquilateral* proportion, but it muſt be obſerv'd that this height is not always to be found by numbers.



There is another height to be found, which tho leſs, has notwithſtanding a very good proportion with the length and breadth of the Room. Having drawn the Lines A B, A C, C D, and D B, which repreſent the breadth and length of the Room, and the height taken according to the firſt method, which is C E being join'd to A C; draw the Line E D F, then prolonging the Line A B till it touches the Line E D F, in the Point F, the Line B F ſhall be the height of the Arch. But to find it by numbers is thus. Having taken the length and breadth of the Room according to the firſt method, which height is in the foregoing Example 9 Foot; put together the length, the breadth, and the height, as this Figure repreſents, then multiply the 9 by 12, and the 6, and the product of the 12 being ſet under the 12, and that of the 6 under the 6; multiply 6 by 12, lay the product under the 9, which will make 72, and having got a number which being multiplied by 9, produces 72, as 8 would do in this Example, I ſay that the Arch is to be 8 Foot high. Theſe different heights have ſuch a relation amongſt themſelves, that the firſt is larger than the ſecond, in the ſame proportion with which the ſecond is larger than the third. We may then make uſe of each of theſe heights, according as they will allow more conveniency in contriving, that the ſeveral Rooms of different dimenſions may have their *Arches* equally high, and yet with a juſt proportion. By theſe means the Rooms will have an agreeable Aſpect, and the Floor above will be upon a level, and very commodious. There are other proportions for the height of *Arches*, which have no determinate Rules: and ſo they muſt be left to the Architect to make uſe of them, according to his Judgment, and as he ſees neceſſary.

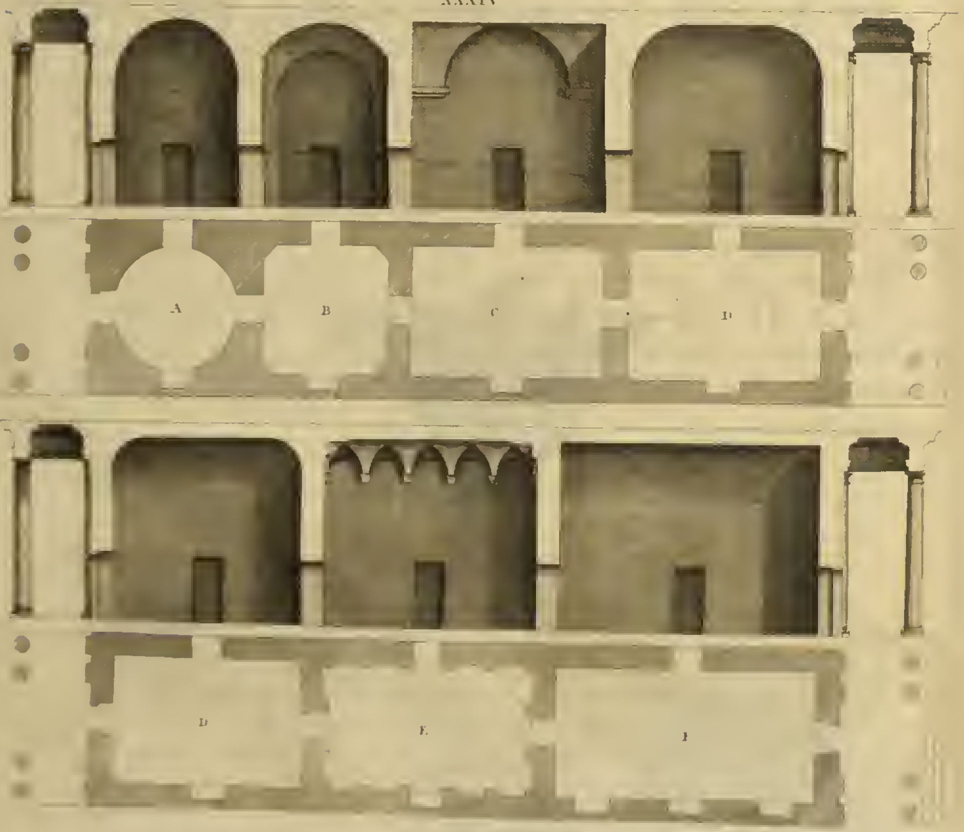
12	9	6
108,	72,	54
	8	

CHAP. XXIV.

Of the divers ſorts of ARCHES.

THERE are ſix different forms of *Arches*, viz. *croſs'd*, *faciated*, *flat*, (thoſe are call'd ſo, which are but a Section of a Circle) *round*, *grinded*, and *ſhell-like*, all which have in height the two thirds of the breadth of the Room. The two laſt are but of a modern Invention, but the other four were us'd by the Antients. Round *Arches* are fit for ſquare Rooms: and the way to make them, is to leave in the four Angles ſome ſort of *Mutules*, *Cartooſhes*, *Conſoles*, *or any other ſhouldering-pieces*, to bear the *Arch*, which in the middle happens to be flat, but more round, as it comes nearer the Angles. Such a one is at *Rome* in the Bath of *Titus*, which was almoſt ruined when I ſaw it. I have drawn here the form of each ſort of *arching*, appropriated to the Figure of the Rooms that are fit for the ſame.

XXXIV



CHAP. XXV.

Of the Meaſures of DOORS *and* WINDOWS.

TIS not poſſible to give any certain and determinate Rule for the height and breadth of the principal Gates, or Doors of Buildings, nor of the Doors and Windows of Rooms; becauſe, that, for to make the principal Gates, the Architect muſt accommodate them to the extent of the Edifice, the quality of the Maſter, and the uſe that is to be made of them, by what goes in, or out of the ſame. The following method ſeems to me to ſucceed well enough: that is, to divide all the height from the Ground to the firſt Ceiling above into three parts and a half (as *Vitruvius* mentions in his 4th Book, Chap. 6.) and to give two of thoſe parts to the height of the opening, and one to its breadth, wanting a 12th of the height. The Antients were wont to make their Doors narrower above than below, as may be ſeen in a Temple at *Tivoli*; and *Vitruvius* teaches the ſame, perhaps for procuring a greater ſolidity The great Doors ought to be plac'd in ſuch a manner, that there may be a free coming to them from all parts of the Houſe. Doors within the Houſe ought not to exceed three Foot in breadth, nor ſix and a half in height: nor can they be leſs than five Foot high by two wide. As for the openings of the Windows, one muſt conſider how to place them ſo that the Rooms ſhould not receive too much nor too little Light; and that the Windows themſelves be not too cloſe, nor at too great diſtance one from another. Therefore in ordering of them the dimenſions of the Rooms are to be conſider'd, becauſe it is plain that a large Room wants more Light than a little one; and if Windows are made leſs in number and ſmaller than the Building requires, the Rooms will be dark: as on the contrary, if they exceed both in number and largeneſs of the opening, they'll render the Rooms unhabitable, becauſe of the Air which will bring in, according to the ſeaſons, too much cold, or too much heat; except they are ſituated to a temperate expoſition of the Sun. For theſe Reaſons, the breadth of the opening of the Window ought not to exceed the fourth part of that of the Rooms, nor to be leſs than the fifth: they muſt likewiſe have in height two Squares, and a twelfth part. And becauſe a Houſe is made of ſeveral Rooms, ſome of a large, ſome of a ſmall, and ſome of a middle ſize; and that nevertheleſs all the Windows of the ſame Story are to be equal, I chuſe to take the meaſure of them on the dimenſion of thoſe Rooms whoſe length is two thirds more than the breadth, that is, as 10 Foot are to 30: and I divide that breadth into 4 parts and a half, one of which ſerves for the breadth of the opening of the Windows, giving to the height two of the ſaid parts, with a ſixth of the breadth, and I keep the ſame proportion of all the other Windows. Thoſe of the ſecond Story ought to be lower by a ſixth part than thoſe of the firſt; and if there be ſome others above them (as in a third Story) they muſt follow the ſame diminution. One muſt take great care alſo, that the Windows may be equal one with the other in their rank and order; ſo that thoſe on the right hand may anſwer thoſe on the left, and thoſe above may be plac'd right over thoſe below. Likewiſe, the Doors muſt be exactly over one another, to the end that the void may be upon the void, and the ſolid upon the ſolid. Moreover they require to be upon the ſame Line, that one may ſee through from one end of the Houſe to the other, which is very beautiful and cool in the Summer, and has many conveniencies beſides.

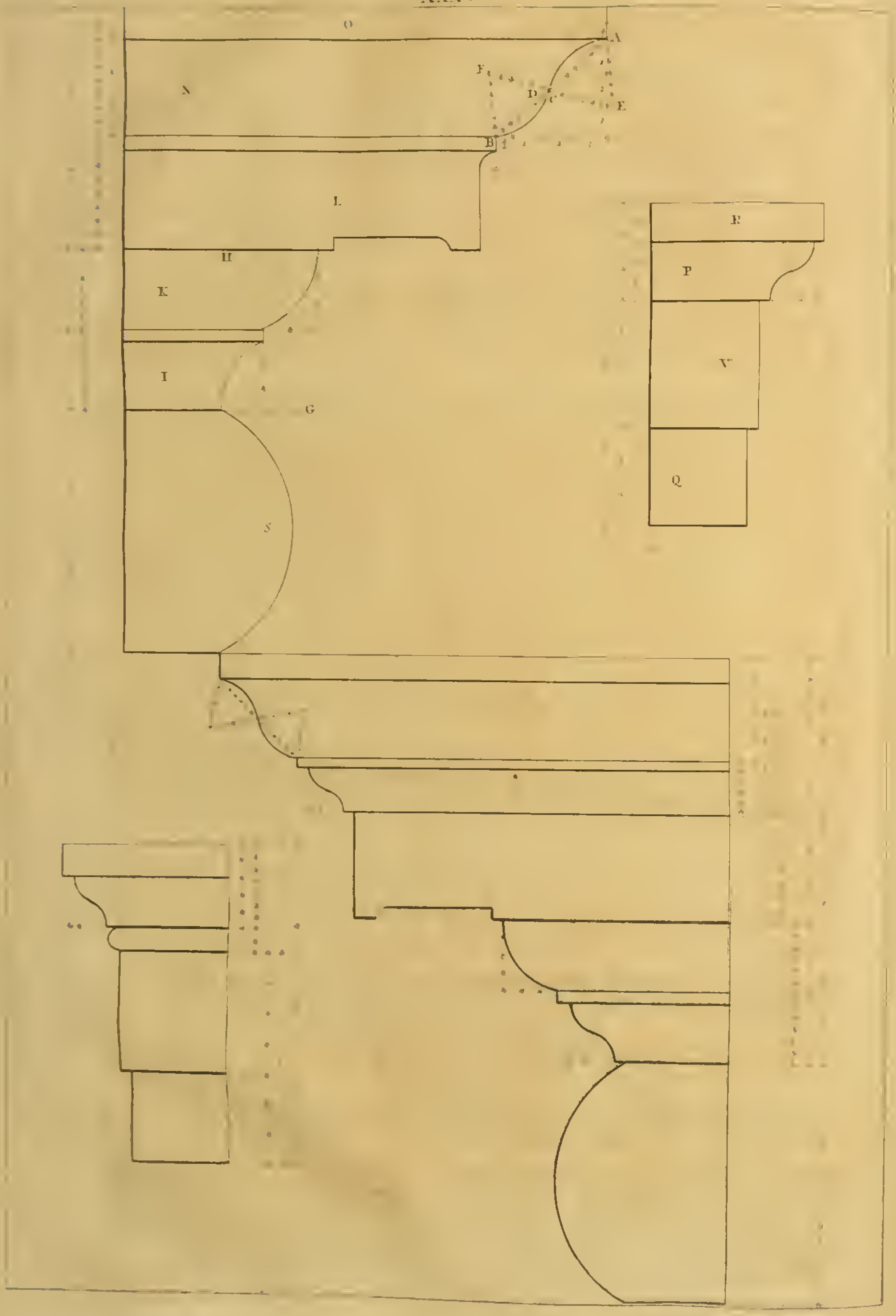
For ſolidity's ſake certain *Arches* are turn'd over the Cornices of Doors and Windows, which Workmen call *Flat-Arches*, to prevent the Doors and Windows from being preſs'd with too much weight, which is of no little importance for the laſting of the Building. The Windows muſt be diſtant from the Corners of the Building as much as poſſible, as I have obſerv'd before; becauſe that part whoſe Office is to ſupport, bind, and faſten all the reſt of the Fabrick, ought not to be open and weaken'd. The Pilaſters, Jambs, or Cheeks of Doors and Windows are not to be thicker than the fifth part of the breadth of the opening, nor leſs than the ſixth. It remains to ſee their Ornaments.

CHAP. XXVI.

Of the Ornaments of DOORS *and* WINDOWS.

NOW to enrich and adorn the principal Doors in Buildings, may eaſily be known from what *Vitruvius* teaches in the 6th Chapter of his 4th Book, with the help of the explanation and draughts made by the moſt Reverend *Barbaro* upon that Subject,

XXXV



Subject, together with what I have ſaid and deſign'd already about the five Orders: wherefore leaving theſe things, I ſhall only give here ſome Ornaments of the Doors and Windows of Chambers, in the manner that they may be variouſly made; and will alſo ſhew the method of profiling each Member with grace, and its due *Projecture.* The Ornaments which are given to Doors and Windows, are the *Architrave*, *Frize*, and *Cornice.* The *Architrave* turns about the Door, and ought to be as thick as its *Jambs*, or *Pilaſters:* which (as I have ſaid) muſt not be leſs than the ſixth part of the breadth of the opening, nor more than a fifth. The dimenſions of the *Frize* and *Cornice* are alſo taken from the ſame opening. Of the two following inventions the firſt, that is the uppermoſt, is meaſur'd thus.

* The Architrave (*which is ſuppos'd here to be the ſixth part of the breadth of the opening*) is divided into four equal parts, three of which are allow'd for the *Frize:* and five, like them, will make the *Cornice.* The *Architrave* is again divided into ten parts, the firſt *Faſcia* takes up three, the ſecond four; and the three remaining are ſubdivided into five, two of which are for the *Regula*, or *Liſtel*, the three others for the *Cima reverſa:* its *Projecture* is equal to its height; the *Regula* projects leſs than half of its thickneſs. The *Cima reverſa* is made in the following manner: a ſtrait Line being drawn from the underneath of the *Regula* to the upper part of the ſecond *Faſcia*, that line is divided into two parts, ſo as each of theſe halfs is the *Baſe* of a Triangle *Iſocel*, *that is of two equal ſides*; and on the Angles oppos'd to theſe *Baſes* the fix'd foot of the Compaſs being plac'd, and the *Curve lines* drawn, they'll form the ſaid *Cima reverſa.*

The *Frize*, which takes up three parts of the *Architrave* divided into four, is made the *Convex* of a portion of a *Circle* leſs than the *Semicircle*; its largeſt diameter falling *plum* over the *Cimaſium* of the *Architrave.* The five parts allow'd for the *Cornice*, are diſtributed to its Members in this manner; one is given to the *Cavetto* with its *Liſtel* (which is a fifth part of the ſaid *Cavetto*) the projecture of which *Cavetto* is two thirds of its height. To deſign it, one muſt form a Triangle *Iſocel*, the center of which is (as here) the angle C; ſo that the *Cavetto* becomes the *Baſe* of the Triangle. Another of the ſaid five parts is given to the *Ovolo.* The projecture of it is alſo the two thirds of its height, and is likewiſe

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* *Plate* XXXV.

O form'd

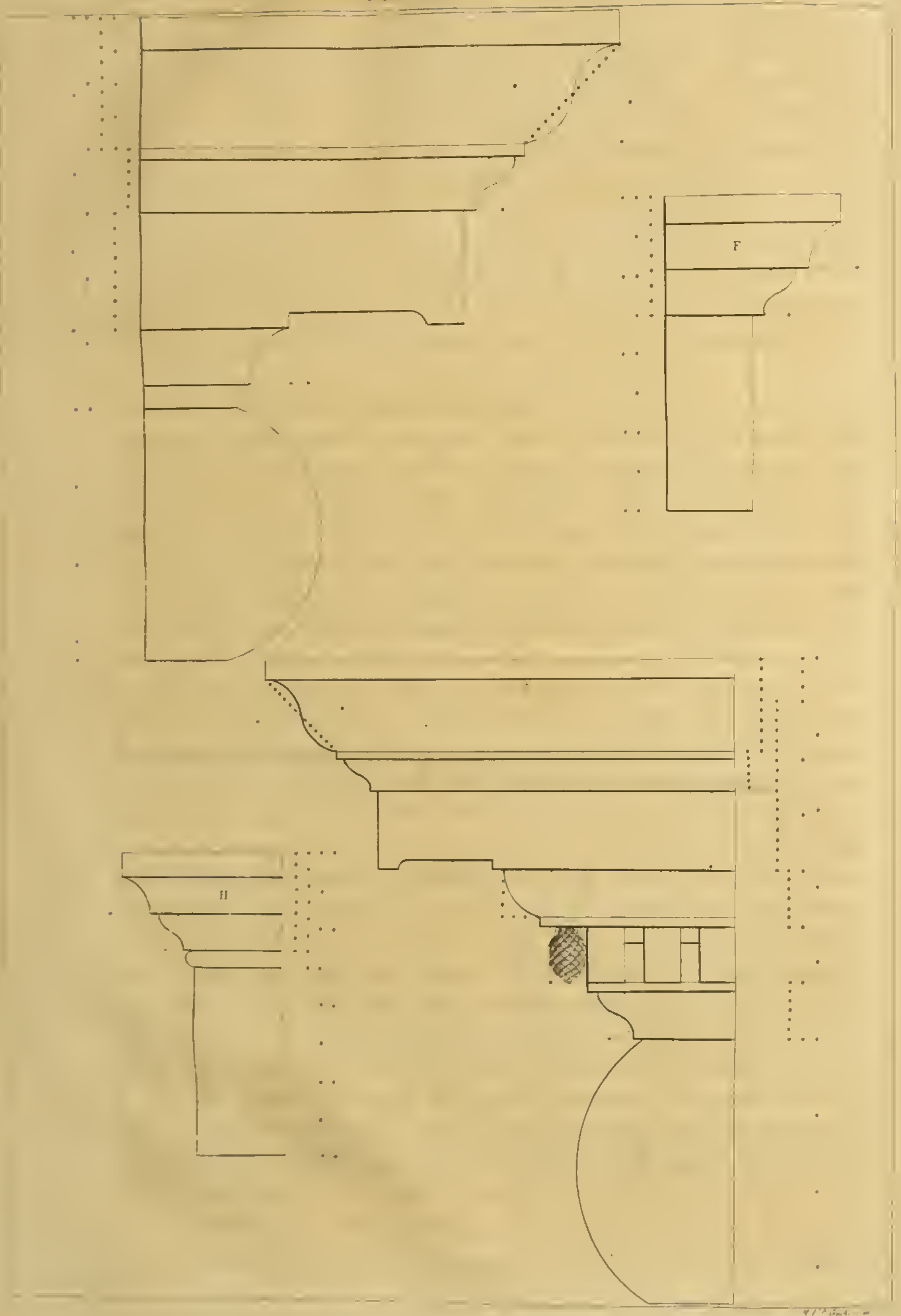
form'd by the help of an *Iſocel* triangle, its Center being at the point H. The other three parts of the five, are ſubdivided into 17; eight for the *Corona* with its *Liſtels*, of which that above makes one of the eight parts; and that which is below, and makes the hollow of the *Corona*, has but a ſixth part of the *Ovolo* The other nine are for the *Cima recta* and its *Regula*, which is a third of the ſaid *Cima*. But to make the ſaid *Cima* of an elegant form and juſtneſs, the ſtrait line A B is drawn, and divided into two equal parts at the point C; one of theſe two parts is ſubdivided into ſeven, whereof ſix being taken at the point D, one muſt draw the two Triangles A E C, and C B F: then on the points E and F a foot of the Compaſs being fix'd, the portions of the *Circles* A C, and C B, will form the ſaid *Cima recta.*

The *Architrave* of the ſecond invention (which is the lowermoſt) is likewiſe divided into four parts, three of which are given to the height of the *Frize*, and five like them to the *Cornice*. The *Architrave* is again divided into three parts, two of which being ſubdivided into ſeven, three are for the lower *Faſcia*, and four for the other. The third part of the *Architrave* is divided into nine parts, of two whereof is made the *Aſtragal*, and the ſeven remaining, being ſubdivided into five, three are for the *Cima reverſa*, and two for the *Orlo*, or *Regula.*

The height of the *Cornice* is divided into five parts and three quarters. One of which being ſubdivided into ſix parts, five are given to the *Cima reverſa* above the *Frize*, and the ſixth for its *Liſtel*; the *Projecture* of the ſaid *Cima* is equal to its height, as is that of the *Liſtel*. The *Ovolo* takes the ſecond part of the height of the *Cornice*, and its *Projecture* is three quarters of its height; the *Liſtel* above the *Ovolo* is a ſixth of it, and projects juſt as much. The other three parts of the height of the *Cornice* are ſubdivided into 17, eight of which are for the *Corona*, whoſe projecture is one third more than its height. The other nine are ſubdivided into four parts; three are for the *Cima recta* and one for the *Orlo*, or *Liſtella*. The three quarters remaining are ſubdivided into five parts and a half; of one is made the *Liſtella*, and the four and a half for the *Cima reverſa* above the *Corona*. The projecture of this *Cornice* is equal to its thickneſs, or height. By the means of the two following Deſigns, one may know the Members of the ſecond invention.

Mem-

XXXVI



Members of the *Cornice* of the firſt invention.

I. *Cavetto.*
K. *Ovolo.*
L. *Corona.*
N. *Cima recta.*
O. *Orlo, or Liſtella.*

Members of the *Architrave.*

P. *Cima reverſa.*
Q. Firſt *Faſcia.*
V. Second *Faſcia.*
R. *Orlo, or Liſtella.*
S. *Convexity,* or *ſwelling of the Frize.*
T. *Part of the Frize which enters into the Wall.*

* Of theſe two other inventions following, the *Architrave* of the firſt mark'd F, is likewiſe divided into four equal parts, three and a quarter of which make the height of the *Frize,* and five like them is the height of the *Cornice.* The *Architrave,* being divided into eight parts, five are given to the *Plain,* and three to the *Cimaſium,* which *Cimaſium* is ſubdivided into eight, three for the *Cima reverſa,* three for the *Cavetto,* and two for the *Orlo* or *Regula.* The height of the *Cornice* is divided into ſix parts, two are for the *Cima recta* with its *Orlo* or *Regula,* and one for the *Cima reverſa* with its *Liſtella.* The *Cima recta* is divided into nine, eight of which are for the *Corona* with its *Liſtella.* The *Aſtragal,* or *Tondino,* above the *Frize,* is but a third of one of the ſaid ſix parts; and what remains between the *Corona* and the *Aſtragal,* is left for the *Cavetto.*

In the next Invention the *Architrave* mark'd H, is divided into four parts: the *Frize* is as high as three and a half of them, and the *Cornice* as five. The *Architrave* being again divided into eight, the *Faſcia* takes five, and the three others are for the *Cimaſium:* which *Cimaſium* being ſubdivided into ſeven, whereof the *Aſtragal* takes one; the ſix are again ſubdivided into eight, three of which are for the *Cima reverſa,* three for the *Cavetto,* and two for the *Orlo,* or *Regula.*

The whole height of the *Cornice* is divided into ſix parts and three quarters. The *Cima reverſa, Ovolo,* and *Dentilli* take there. The *Cima* projects as much as its ſquare, the *Dentilli* project as much as two of three parts of their height, and the *Ovolo* as three of four parts. The *Cima reverſa,* between the *Cima recta* and the *Corona,* is made of the three quarters of a part of the firſt diviſion. The three remaining parts are ſubdivided into 17. Nine of which are for the great *Cima* with its *Orlo*, or *Regula*; and eight for the *Corona*. This *Cornice's Projecture* is equal to its height, or thickneſs, as the other aforeſaid.

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* *Plate* XXXVI.

CHAP. XXVII.

Of CHIMNEYS.

THE Antients us'd to heat their Chambers in this manner. They made their Chimneys in the middle of the Room, with Columns, or *Modilions* to bear up the *Architrave*, upon which were the *Funnels* of the Chimneys made in a Piramidal form, which convey'd away the Smoak. Of that kind one may be ſeen at *Baiæ* near the Fiſh-pond of *Nero*; and another near *Civita-vecchia*. And when they did not care to have any Chimney, they us'd to make *Pipes*, or *Funnels*, in the thickneſs of the Walls, through which aſcended the heat of the fire which was kept under the Rooms, and ſo was convey'd thro certain *Vents*, or *Valves* that were at the top of the ſaid *Pipes*, or *Funnels*. Much like this the Gentlemen of the Family of *Trenti* in the *Vicentin* refreſh in the Summer the Chambers of their *Villa* at *Coſtoza*. For that Building is ſituated upon Hills, in which are certain great *Caves* call'd by the Inhabitants *Covali*, which in former times were Quarries. Theſe, I ſuppoſe, *Vitruvius* means in his ſecond Book, wherein, ſpeaking of Stones, he tells us that in the *Trevizan* there is a ſort of Stone which is ſaw'd like Timber. From theſe Caves ariſe extream cold Winds, which theſe Gentlemen introduce into their Houſe, through certain ſubterranean Vaults, nam'd by them *Ventiducts*: and by the means of certain *Pipes* or *Funnels*, like to thoſe whereof I have ſpoken before, they make them run through all the Chambers, opening and ſhutting them at pleaſure, to take more or leſs of that cold Air, according to the Seaſon. And though this place would be wonderful, were it only for this ſingular conveniency, nevertheleſs that which renders it ſtill more admirable and worthy to be ſeen, is another place call'd the *Priſon of the Winds*; which is a ſubterranean Room contriv'd by *Signior Franciſco di Trenti*, nam'd by him *Æolia*, that is, the Palace of *Æolus*, in which many of theſe *Wind-Pipes*, or *Ventiducts*, are diſcharg'd: and to render it beautiful and worthy of this name, he has ſpar'd neither pains, nor coſts of any ſort.

But to return to our Chimneys, we *Moderns* place the *Funnels* of the Chimneys in the thickneſs of the Walls, and carry them quite through the Roof, and higher than the *ridge*, that they may the better carry the Smoak away into the Air. One muſt take care that the Funnels be made neither too wide, nor too narrow: for if they be too wide, the Wind, having a great deal of room to play in, will drive back the Smoak into the Room; and if they are too narrow, the Smoak, not having a free paſſage, will alſo return backwards. Therefore the Chimney *Funnels* of Chambers are not to be made narrower than half a Foot, nor larger than nine Inches; and in length two Foot and a half. The mouth of the *Piramide*, where it meets the *Funnel*, muſt be a little narrower, that in caſe the Smoak happens to come back, it ſhould put a ſtop to its returning into the Room. Some make the *Funnels* crooked, thinking that by the winding of them, and the force of the Fire, which naturally drives the Smoak upward, it can't return back into the Room. The Chimney-tops, or openings by which the Smoak goes out, muſt be broader, and free from any combuſtible matter. The *Jambs* and *Mantle-trees* of Chimneys, on which the *Funnels* lie, muſt be curiouſly wrought; for as to *Ruſtick-work*, it does not look well, unleſs it be in a very large Building, for the Reaſons aforemention'd.

CHAP. XXVIII.

Of Stair-caſes *and their different ſorts; of the number and proportions of their Steps.*

THERE ought to be great care taken in the well-placing of Stair-caſes; for there is not little difficulty to find a place convenient enough, ſo as the Stairs may not be a hindrance to the reſt of the Building. Therefore a particular place muſt be mark'd out, that no part of the Building ſhould receive any prejudice by them. There are three openings neceſſary to a Stair-caſe. The firſt is the Door-way that leads to them, which the more it is in ſight, the better it is; and I highly approve that it be in ſuch a place, where before one comes to it, may be ſeen the beſt part of the Houſe; for altho the Houſe ſhould be little, yet at this rate it will appear much larger: therefore the ſaid Door muſt be obvious, and eaſy to be found.

The ſecond opening is that of the Windows, through which the Light comes into the Stairs. They ought to be in the middle, and large enough that all the Stairs may be every where inlighten'd. The third opening is the landing place, by which one enters into the Rooms above, which ought to lead firſt into the largeſt places, fair and well adorn'd.

Stair-caſes will be perfect, if they are ſpacious, light and eaſy to aſcend: as if, in ſome ſort, they ſeem'd to invite People to mount. To make them lightſome, they muſt have a perfect Light, that as I ſaid, diſperſes it ſelf equally to all parts. As to their ſpacouſneſs, 'twill be enough, if in reſpect of the bigneſs and quality of the Fabrick, they do not appear too little, nor too narrow. Nevertheleſs they muſt never be narrower than four Foot, to the end that if two Perſons meet, they may commodiouſly paſs one by the other. They will be convenient enough with regard to the whole Building, if the *Arches* under the Steps are made ſo large as to hold ſome Goods, or other neceſſary things; and convenient likewiſe for the Perſons that come up and down, if the Stairs are not too ſteep, nor the ſteps too high. Therefore they muſt be twice as long as broad. The Steps ought not to exceed ſix Inches in height; and if they be lower, they muſt chiefly be ſo to long and continu'd Stairs, for they will be ſo much the eaſier, becauſe one needs not lift the Foot ſo high: but they muſt never be lower than four Inches. The breadth of the Steps ought not to be leſs than a Foot, nor more than a Foot and a half. The Antients uſed to make the Steps of an odd number, to the end that beginning to aſcend with the right Foot, they might end with the ſame Foot, which they took to be a good Omen, and a greater mark of reſpect ſo to enter into the *Temple*. It will be ſufficient to put eleven or thirteen Steps at moſt to a flight, before one comes to half-pace, thus to help weak People, and of ſhort breath, that they might reſt a little, and that if ſomething happens to fall from above, it may ſtop there.

Stairs are made either ſtrait, or winding. The ſtrait may be made either divided into two *Branches*, or Paſſages, or quite Square, in ſuch a manner that they turn on four ſides. * To make them in this laſt manner, all the ſpace muſt be divided into four parts, whereof two muſt be for the Stairs, and two for the vacancy in the middle, by which the Stairs ſhould receive Light, if it be left open. They may be made with a Wall

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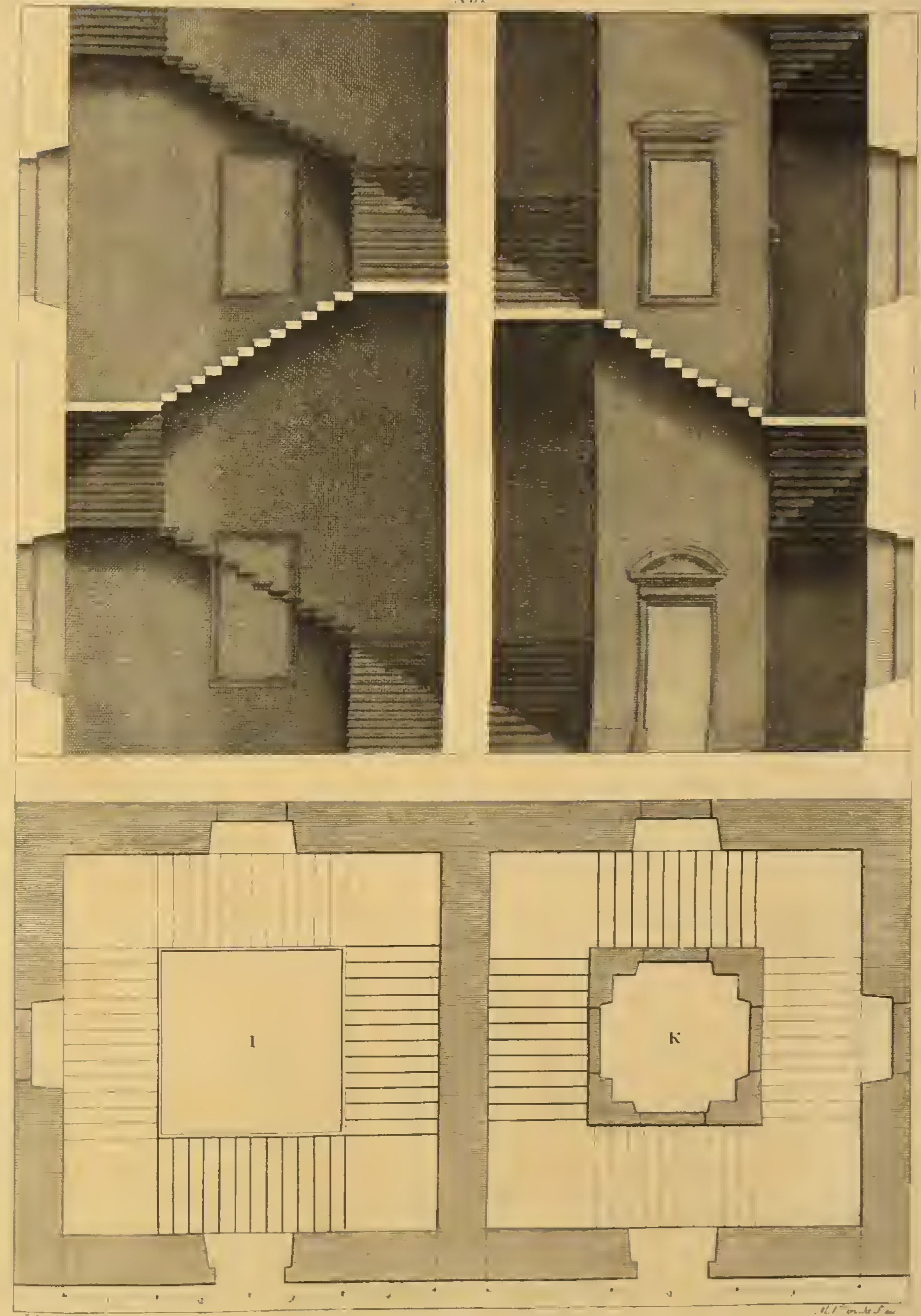
* *Fig.* XLI.

within,

XLI



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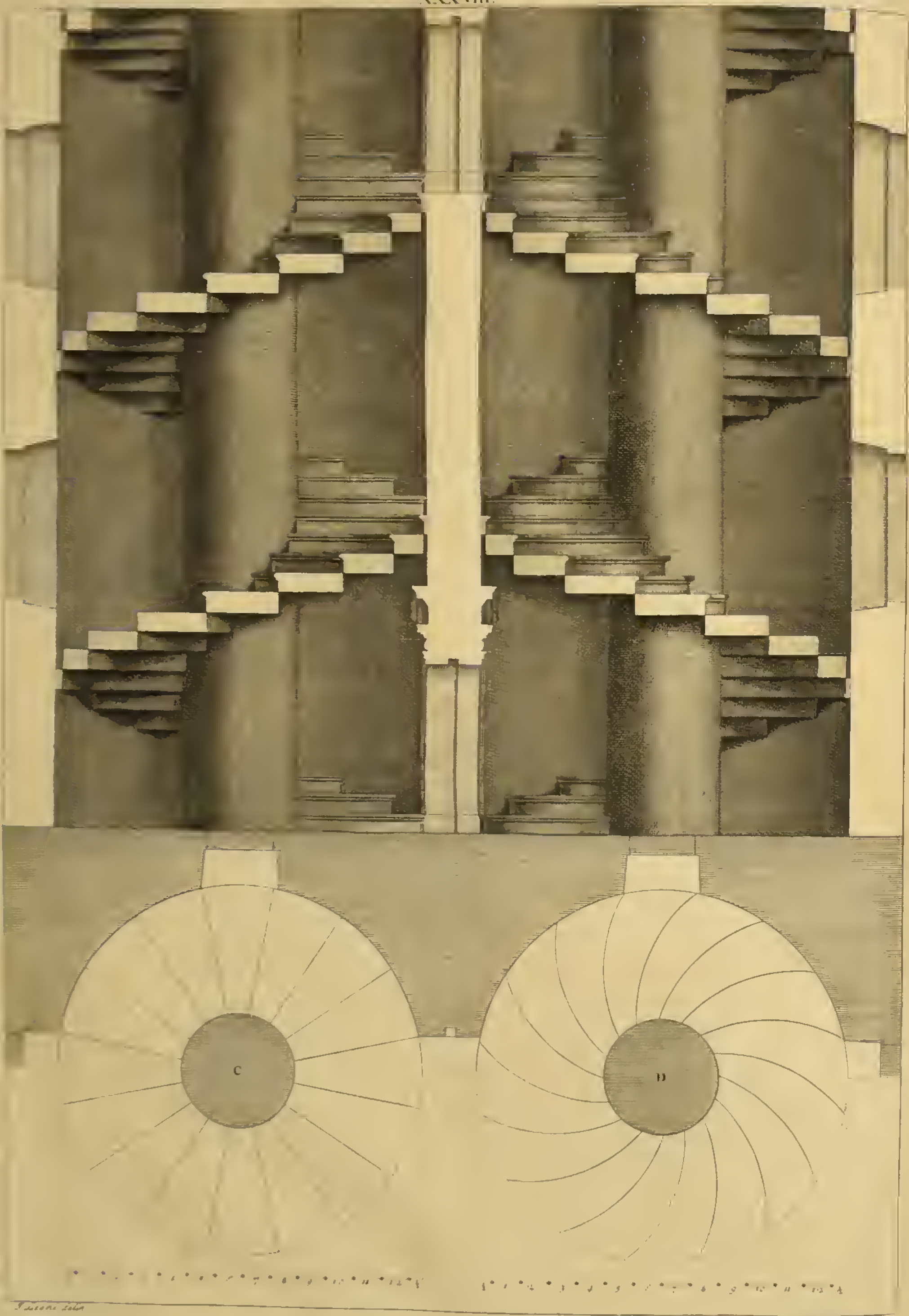

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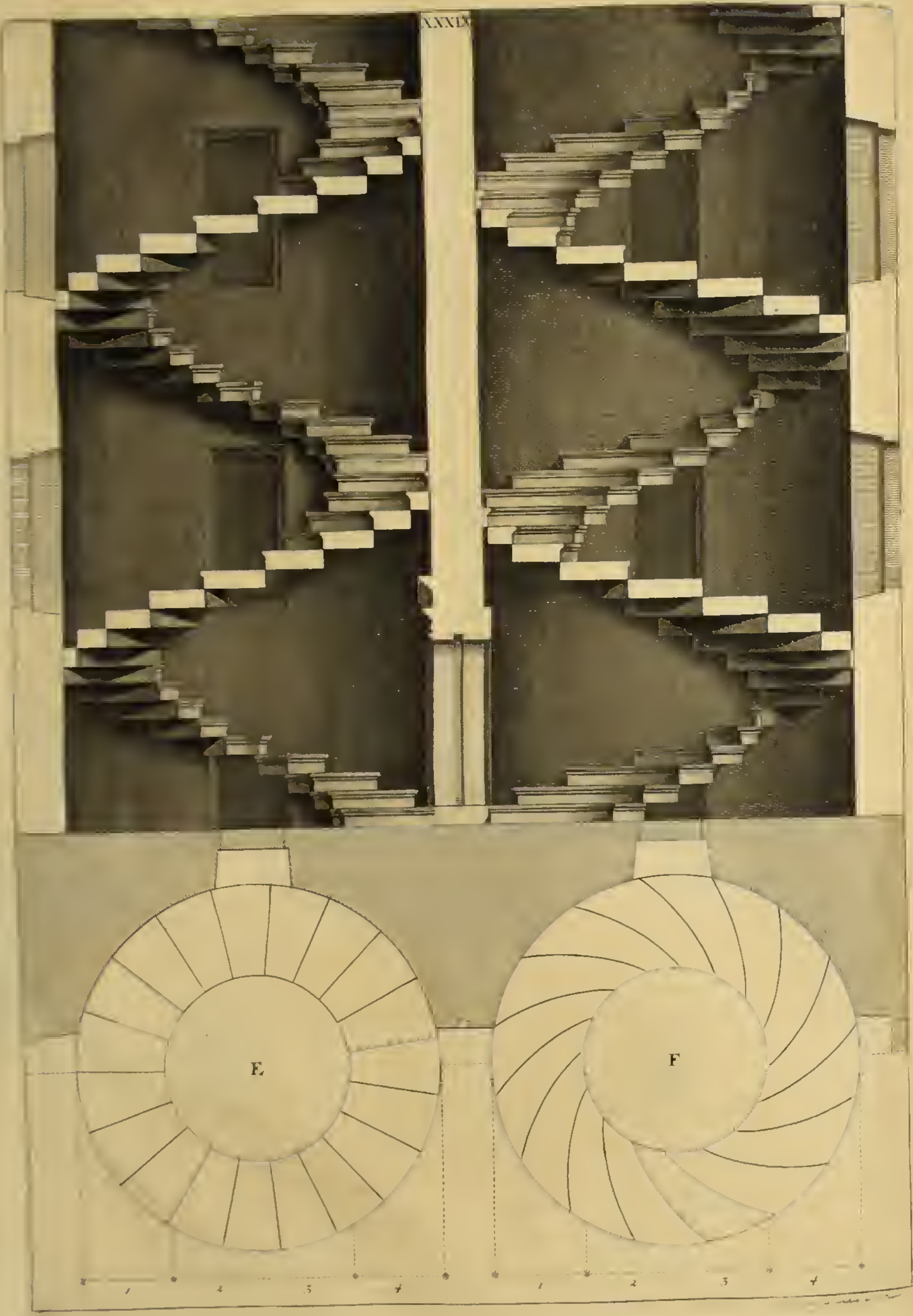
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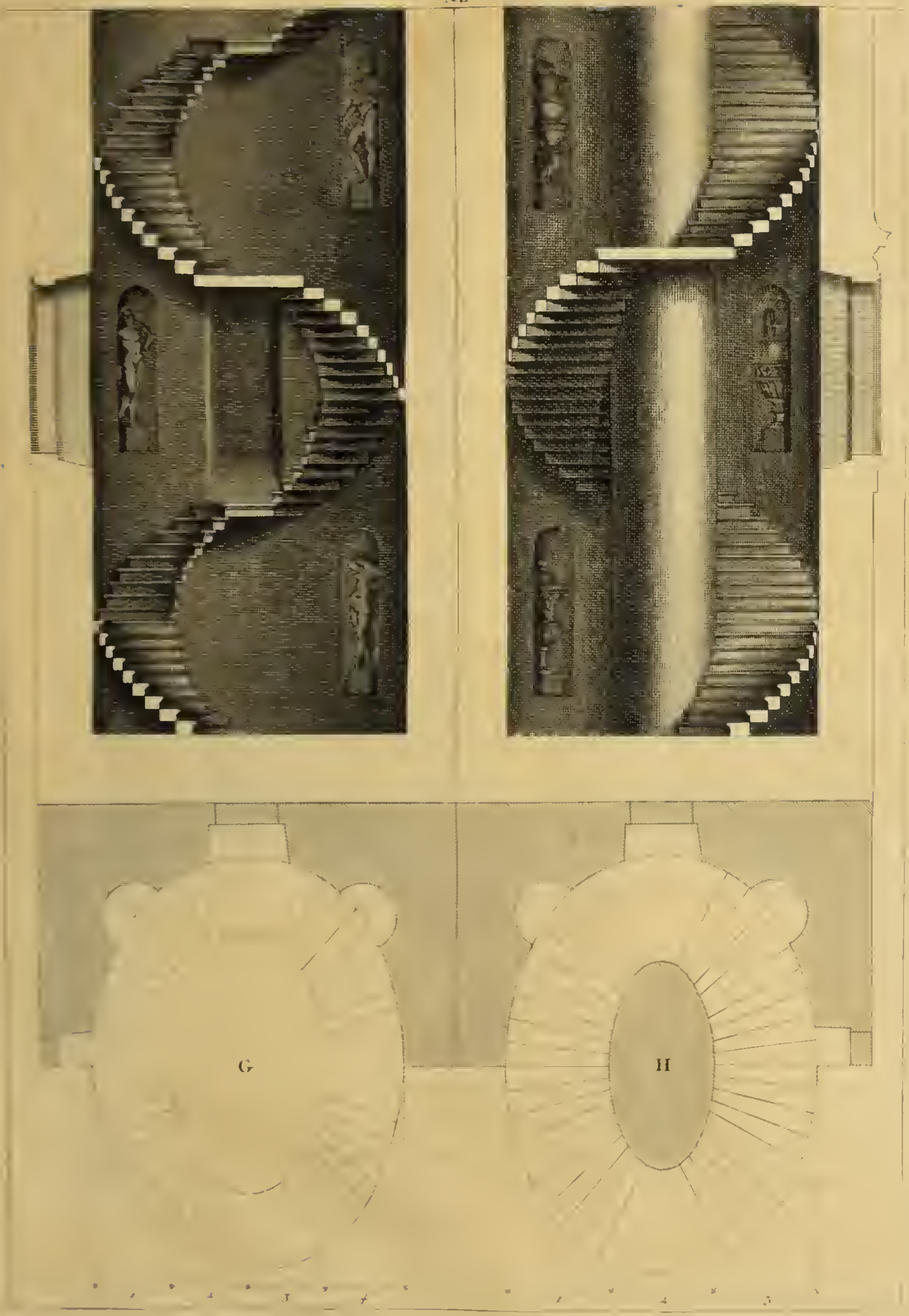

within, and then within the two parts which are allow'd for the Stairs, the Wall is included, which makes the *Caſe* or *Newel*; tho there is no neceſſity to do it, for it may be done without a Wall within. Theſe two ſorts of Stairs were invented by *Signior Lewis Cornaro*, a Gentleman of an excellent Genius, as one may judge by the Deſign of a very fine *Gallery*, and a magnificent Palace which he has erected for himſelf at *Padua*.

As for *Winding Stairs*, which are alſo call'd *Cockle Stairs*, ſome are round, ſome oval, ſome with a *Newel* in the middle, ſome open, eſpecially when room is wanting; becauſe they take up a great deal leſs than the ſtrait Stairs, yet not ſo eaſy to go up and down. Thoſe which are open in the middle are very handſome, becauſe they may have light from above; and that thoſe which are above, may ſee thoſe who are coming up, and are alſo ſeen by them.

* Thoſe which have a *Newel* in the middle are made in this manner. The diameter being divided into three parts, two are given to the Steps, and the third is for the *Newel*, as in the Deſign mark'd A: or otherwiſe the diameter may be divided into ſeven parts, three of which are for the *Newel*, and four for the Steps. Juſt in this manner is the *Staircaſe* of the Column of *Trajan* at *Rome*: and if the Stairs are made circular, as in the Deſign B, they will be handſomer and longer than if they were made ſtrait.

† *But as it may happen that the ſpace will not give room for theſe meaſures, then the diameter may be reduc'd and divided, according as it is here repreſented*, C D.

** The diameter of the Stairs open in the middle muſt be divided into four parts, two of which are for the Steps, and two for the middle.

Beſides the aforeſaid ſorts of Stairs, there has been another ſort of winding Stairs, invented by *Signior Marc-Antonio Barbaro*, a Gentleman of *Venice*, of an excellent Judgment, which is very convenient for narrow places. It has no *Newel* in the middle, and the Steps being winding or circular, are much longer: its diviſion is the ſame as the aforeſaid. See the Deſign E F.

†† Thoſe which are Oval, are divided in the ſame manner as the round; they are very handſome and pleaſant, becauſe all the Windows and Doors are in the middle, and at the head of the Oval, and are very commodious. I have made one open in the middle, at the Monaſtry of *Charity* at *Venice*, which is without a *Newel*, and has had a very good Succeſs.

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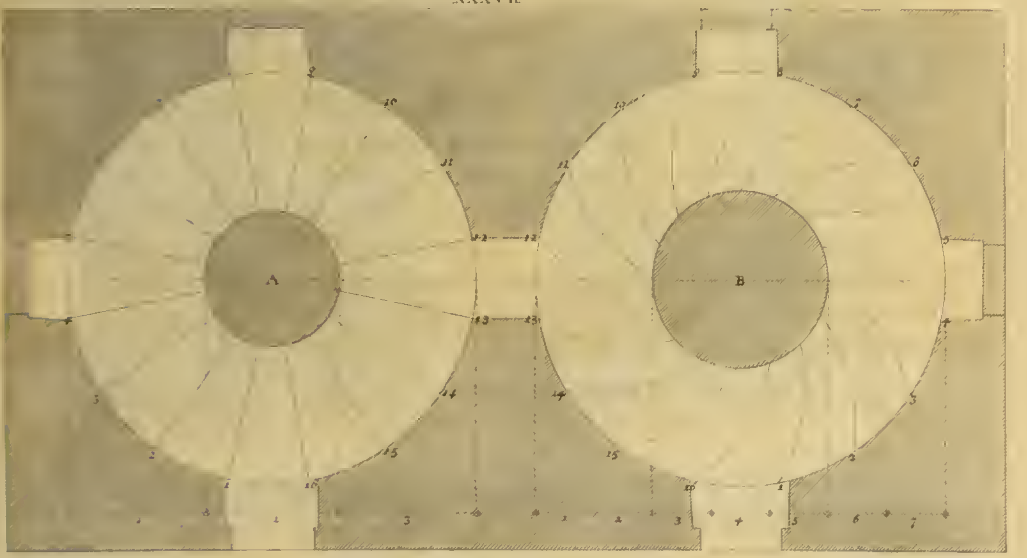
* *Plate* XXXVII. † *Plate* XXXVIII. ** *Plate* XXXIX. †† *Plate* XL.

A: *Winding or cockle Stairs with a Newel in the middle.*
B. *The ſame with circular Steps.*
C. *The ſame with a Newel of a leſs diameter with ſtrait Steps.*
D. *The ſame with circular Steps.*
E. *Winding Stairs open in the middle.*
F. *The ſame with circular Steps.*
G. *Oval Stairs open in the middle.*
H. *Another Oval-Stair with a Newel.*
I. *Strait ſquare Stairs open in the middle.*
K. *Another with a ſquare Wall in the middle.*

XXXVII.



* There is another very handſome manner of Stairs, which the magnanimous King *Francis*, the Firſt, caus'd to be made in the Caſtle of *Chambor* near *Blois* in *France*. 'Tis built in this manner. There are four Stair-caſes, which have four entrances, one entry to each: and they go up the one over the other in ſuch a manner, that being made in the middle of the Building, it may ſerve for four Apartments; ſo that it is not poſſible to go from one into the other, and yet becauſe it is open in the middle, they all ſee each other going up and down, without juſtling one another. This invention being new and beautiful, I have plac'd here the Deſign of it, and mark'd each Stair with its particular Letters on the *Plan* and *Section*, that one may know where each of them begins and where it ends.

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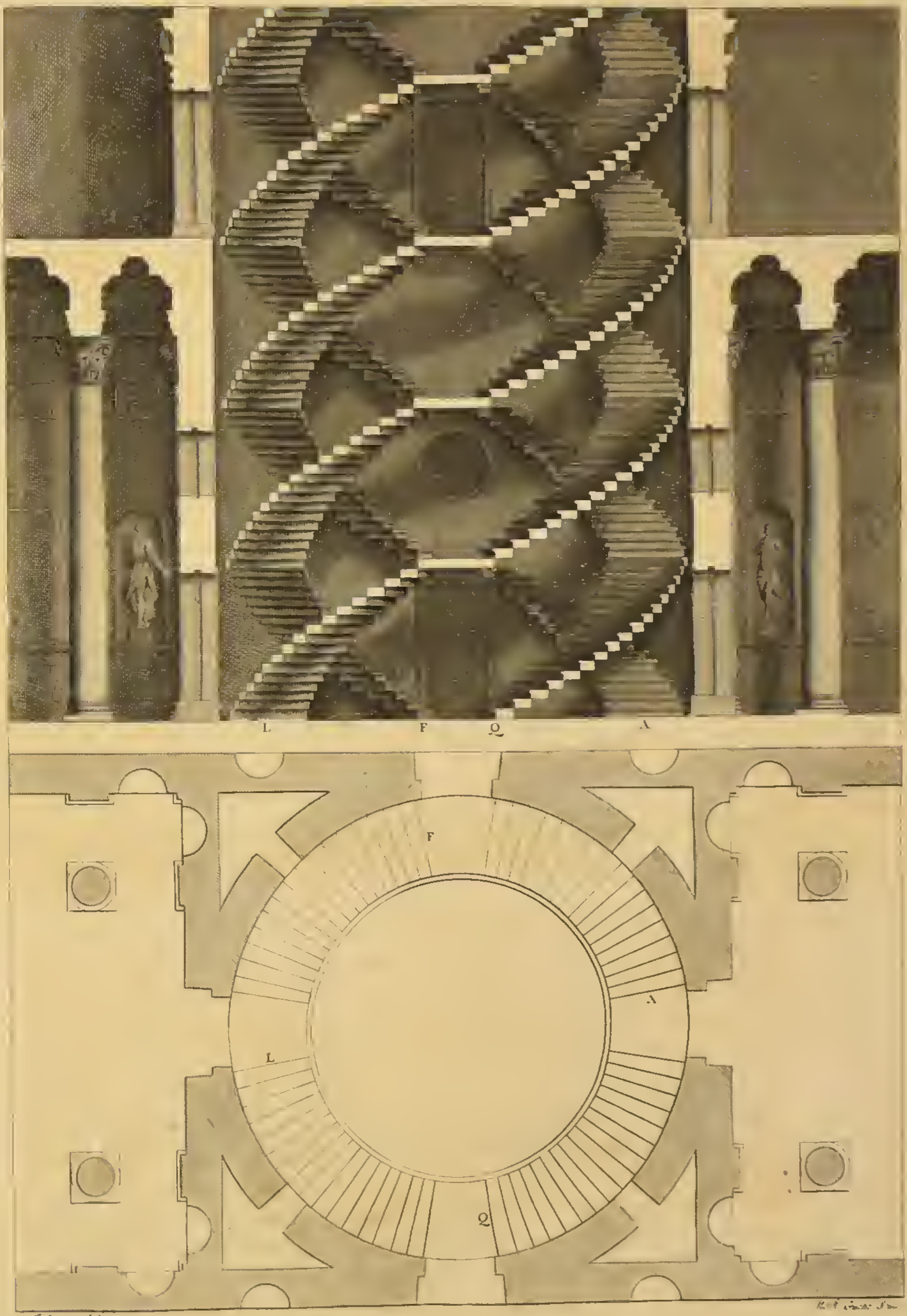
* Plate

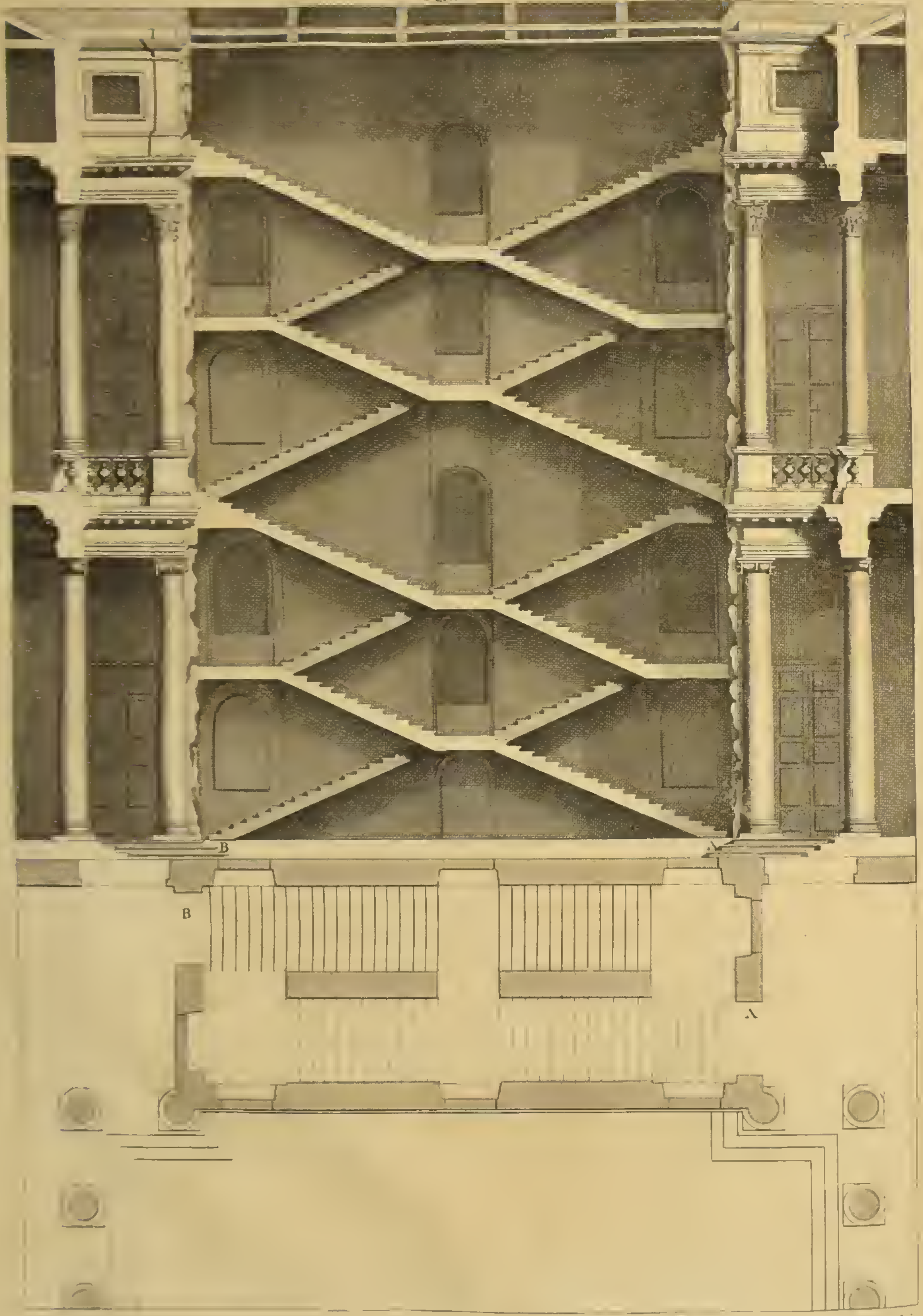
XLII



J. Leoni del.

B. Cole Sc.

XLIII.



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There were alſo to the *Porticos* of *Pompey* at *Rome*, leading to the *Jews* quarter, three Stairs of the ſame kind of an admirable form; for being plac'd in the middle of the Edifice, and where they could not receive any light but from above, the Architect had ſet them upon Columns, to the end that the light might diſtribute it ſelf to all parts alike. According to this Example, *Bramante*, the moſt skilful Architect in his time, made one at *Belvedere*; but without Steps, having the four Orders of Architecture, *Dorick*, *Ionick*, *Corinthian* and *Compoſite*.

To make thoſe *Stair-caſes*, the whole ſpace muſt be divided into four parts, two whereof are for the void ſpace in the middle, and one on each ſide of the Steps and Columns. There are many other faſhions of *Stair-caſes* in antient Edifices, as *Triangular*; and of this ſort are thoſe of the *Cupola* of St. *Maria Rotunda*, which are open in the middle, and receive Light from above.

* In the ſame City thoſe which are in the Church of *Sancto Apoſtolo*, towards *Monte Cavallo*, are very fine; they were double, and many have ſince taken Models thereof: they led to a *Temple* ſeated on the top of the Mountain, as will appear in my Book of *Temples*; and of this ſort of Stairs, is the laſt among the Deſigns.

CHAP. XXIX.

Of ROOFS.

HAVING rais'd the Walls to their intended height, and made the Vaults, laid the Joyſts of the Floors, brought up the Stairs, and perform'd all thoſe things we have ſpoken of hitherto, we are now to raiſe the *Roof*, which embracing every part of the Building, and with its weight equally preſſing upon the Walls, is as a band to all the Work. Beſides that it defends the Inhabitants from Rain, from Snow, from the burning of the Sun, and from the moiſture of the Night; it is alſo of no ſmall help to the Building, caſting off from the Walls the Rain-water, which altho for a little while ſeems to do but little hurt, yet in proceſs of time cauſes much damage. *Vitruvius* ſays that the firſt Men built their Houſes with flat Roofs, but finding that thereby they were not ſufficiently defended from the Weather, neceſſity made them raiſe the middle, in order to give the Water its Current. Theſe Roofs are to be rais'd to a higher or lower pitch, according to the Country in which they are. Wherefore in *Germany* they raiſe their Roofs to a very high pitch and ſharp, by reaſon of the great quantity of Snow that falls there; covering them with *Shingles*, which are ſmall pieces of thin Wood, for fear they would be cruſh'd by the great weight of the Snow. But we, who dwell in a more temperate Country, ought to chuſe a Roof of a handſomer form, allowing only a ſufficient Current for the Water. Therefore the breadth of the Building is to be divided into nine parts, two of which will be a ſufficient pitch, becauſe if it was done of a fourth, the Roof would be too ſtiff; and the Tyles, or Slates, would hardly remain upon it; and in making it only of a fifth, it would be ſo flat, that the Tyles and the Snow muſt lie too heavy upon them. Gutters are commonly made round the Houſes to convey off the Rain Water by Pipes, or Spouts: and over theſe ought to be laid at leaſt a Foot and a half of Wall, becauſe they will be not only thereby the ſtronger; but this will preſerve the Timber againſt the Rain, and the moiſture of the Weather. There are many ways of framing the Timber of the Roofs, but when the middle Walls bear the Girders, they are eaſily laid on; and 'tis what I do much approve, becauſe the out-Walls are leſs preſs'd, and if any end of the Girder ſhould happen to rot, the Roof would not be in ſo much danger of falling.

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* *Plate* XLIII.

The End of the Firſt Book.

THE ARCHITECTURE OF A. PALLADIO;

BOOK *the* SECOND.

CONTAINING

The DESIGNS of ſeveral Houſes which he has
Built either in TOWN, or in the COUNTRY.

WITH

Some other DESIGNS of the Manner of Building amongſt the
GREEKS and ROMANS.

Revis'd, Deſign'd, and Publiſh'd

By GIACOMO LEONI, *a* Venetian; *Architect to His moſt*
SERENE HIGHNESS, *the Late*

ELECTOR PALATINE.

Tranſlated from the Italian *Original.*

Printed for the AUTHOR.

THE SECOND BOOK.

CHAP. I.

Of the good Grace, Suitableneſs, and Proportion which ought to be obſerv'd in private Buildings.

I HAVE treated in the foregoing Book, of all thoſe things which I thought moſt neceſſary to be obſerv'd in the conſtruction of publick and private Buildings, in order to make them beautiful, convenient, and durable. I have alſo ſaid ſomething about the Conveniencies of private Gentlemen's Houſes, of which I particularly deſign to ſpeak in this ſecond Book.

And becauſe we commonly call a Houſe convenient, when it is ſuitable to the quality of its Maſter, and that all the parts of it not only have a proportion anſwerable to the whole, but alſo an exact ſymmetry each with one another; an Architect therefore muſt chiefly obſerve, what *Vitruvius* recommends in his firſt and ſixth Books, *viz.* that when he builds for Perſons of Quality, and more eſpecially for thoſe that are in publick Employment, he muſt build their Palaces with Portico's, Galleries, and large ſtately Halls richly adorn'd: that thoſe who come for buſineſs, or to pay their reſpects to the Owner, may be receiv'd commodiouſly, and delighted and amus'd whilſt they wait for him. But for thoſe of a meaner Station, there muſt be a medium obſerv'd, as well in the ſize and form of the Building, as in the Ornaments and Expence. Judges and Counſellors Houſes muſt alſo have places fit to walk in, and where their Clients may wait without being weary. Thoſe of Merchants require Warehouſes, and other places expos'd to the North, wherein they may keep their Goods and other Commodities; and thoſe places muſt be ſo diſpos'd, that the Maſters may have no occaſion to fear Thieves coming at them. One muſt alſo obſerve ſuch a proportion, that every Member of the Building may agree with the whole; ſo that either in great, ſmall, or ordinary Buildings, one may obſerve the parts, to be great, ſmall, or ordinary, ſuitable to their ſeveral Extents. For without doubt it would be a great fault, and a thing very diſagreeable, if in a large Edifice all the Halls and Rooms were ſmall; or if in a ſmall Houſe, two or three great Rooms ſhould take up the whole. One muſt then (as I ſaid juſt now) have regard, as much as poſſible, to the quality of the Gentleman who builds, more than to his wealth, and make him a Houſe ſuitable to his quality: which being agreed upon, the parts of the Building muſt be ſo adjuſted, that they all may agree with the whole, and every one with each other, with ſuch Ornaments as are ſuitable to them. But it frequently ſo happens, that the Architect is oblig'd rather to follow the fancy of him who intends to build, than thoſe Conſiderations which his Art and Judgment dictate to him.

CHAP. II.

Of the Compartition or Diſtribution of Chambers and other Places.

TO make Houſes convenient for a Family, (without which they cannot be approv'd of by any body) one muſt take a great deal of care, not only in what concerns the chief parts of them, *viz.* the Entries, Halls, Courts, great Rooms, light Staircaſes (ſpacious and eaſy to go up and down) but alſo that the meaneſt and leaſt beautiful of them may be ſituated commodiouſly to ſerve the other greater and more conſiderable Apartments. For in the ſame manner as we ſee in the human Body, ſome noble and beautiful Members, and others again as diſagreeable and ugly, which laſt are nevertheleſs very uſeful to the firſt, and without which they could not ſubſiſt; ſo ſome parts of a Building muſt make a fine and noble appearance, and ſome others be leſs beautiful and elegant, without which the chief ones could not be diſtinguiſh'd, but rather loſe a part of their dignity and perfection. But as our bleſſed Lord has order'd our Members, ſo as to make the fineſt of them to be the moſt expos'd to ſight, and concealing them that are not ſeemingly ſo: juſt ſo we muſt contrive a Building in ſuch a manner, that the fineſt and moſt noble parts of it be the moſt expos'd to publick view, and the leſs agreeable diſpos'd in by-places, and remov'd from ſight as much as poſſible; becauſe thither ought to be carry'd the refuſe of the Houſe, and whatever may produce any ill effect or embarraſſment. For this reaſon I approve, that the Cellars, Wood-houſes, Pantries, Kitchen, Servant's Halls, Landries, Ovens, and other Offices which are continually uſed, ſhould be placed in the lower part of the Building, and which I commonly order a little under ground. This diſtribution has two advantages: the firſt is, that the Apartment above is altogether free from the ſaid Incumbrances; and the ſecond, which is of no leſs conſequence than the former, is, that the ſaid Apartment is thereby much wholeſomer, its Floor being free from the moiſture of the Ground, beſides that its being high renders it more graceful, and contributes to a better proſpect. Care muſt be taken next, that in the reſt of the Building there be large, middle ſiz'd, and ſmall Rooms; and that they be all near one another, for the better Communication between them. Convenient Partitions muſt be alſo contriv'd for Cloſets, Libraries, Horſe-Furniture, and to put out of the way other things which one may have daily occaſion for, and which would appear very unſeemly in a Bed-chamber, Dining-room, or place where Strangers are receiv'd. It is alſo convenient that the Summer-rooms be large and ſpacious, and open to the North; and the Winter ones ſmaller and open to the South and Weſt; becauſe that in Summer we ſeek the Air and Shade, and that in Winter we ſeek the Sun, as well as by reaſon little Rooms are eaſier warm'd than larger ones. But the Rooms deſign'd for Spring and Autumn ſhould look towards the Eaſt, and have their proſpect towards Greens and Gardens. Studies and Cloſets muſt alſo have the ſame proſpect, becauſe the Morning is the beſt time of reſorting to ſuch places. All the Rooms in general, either large, middle ſized, or ſmall, ought to be ſo order'd or contriv'd, that (as I have already ſaid) every parr of the Building may correſpond one with the other, and the whole frame ſhew ſuch a convenience and ſymetry between all its parts, as may render it handſome and agreeable. But becauſe it moſt commonly happens that in Cities, either the Party-walls, the Streets, or publick Places confine and reſtrain an Architect within certain bounds, beyond which he has not the liberty to go; therefore neceſſity compels him to ſuit himſelf with the place according to its Situation: and on thoſe occaſions, if I am not miſtaken, one may receive ſome benefit from the Plans and Elevations I am now going to give; which may alſo ſerve as Examples for what I have already ſaid in my firſt Book.

* This Plate repreſents half a *Vicentine* Foot, half a *French* Foot, and half an *Engliſh* Foot.

All the following draughts have been made and meaſured according to the *Vicentine* Foot, which is here divided into 12 Inches, and every Inch into 12 parts, as are alſo the *French* and *Engliſh* Foot.

N. B. That the *French* Foot, commonly called *Pié de Roy*, is equal to 11 Inches of the *Vicentine* Foot, and the *Engliſh* one makes only 10 Inches one quarter of the ſame.

CHAP. III.

Of the Conſtruction of Houſes in Towns.

I Am ſure that they, who ſhall look upon the Buildings I am going to give the draughts of in this Book, and they, who know how hard it is to introduce a new way, particularly into the art of Building (in which every one preſumes to be knowing) will think me very happy, that I have met with Perſons who were generous, judicious, and reaſonable enough to hear and approve my Reaſons; and afterwards to give over that old way of Building, which is without any proportion or grace at all: and indeed I own it as a particular favour God has done me amongſt many others, to give me an opportunity of putting ſeveral things in practice, which I had learnt by a very laborious Examen and long Study. And tho among thoſe very Buildings ſome have remain'd unfiniſh'd, yet it is very eaſy to judge by what is done, what the whole wou'd have been. I have put the names of the Owners, and the places where the Buildings are ſituated, to their Draughts; that they who have a mind, may ſee how they have ſucceeded in the performance. After this I think it very proper to acquaint the Reader, that I have had no regard to the Rank or Quality of the Perſons in the order of my Draughts; for they are every one of great Quality and Honour, and I plac'd them only as they came firſt to my Memory.

But it is now time to come to our Buildings, the firſt of which is at † *Udena* the Metropolis of *Friuli*. It was built from the Foundations by Signior *Floriano Antonini*, a Gentleman of the ſame

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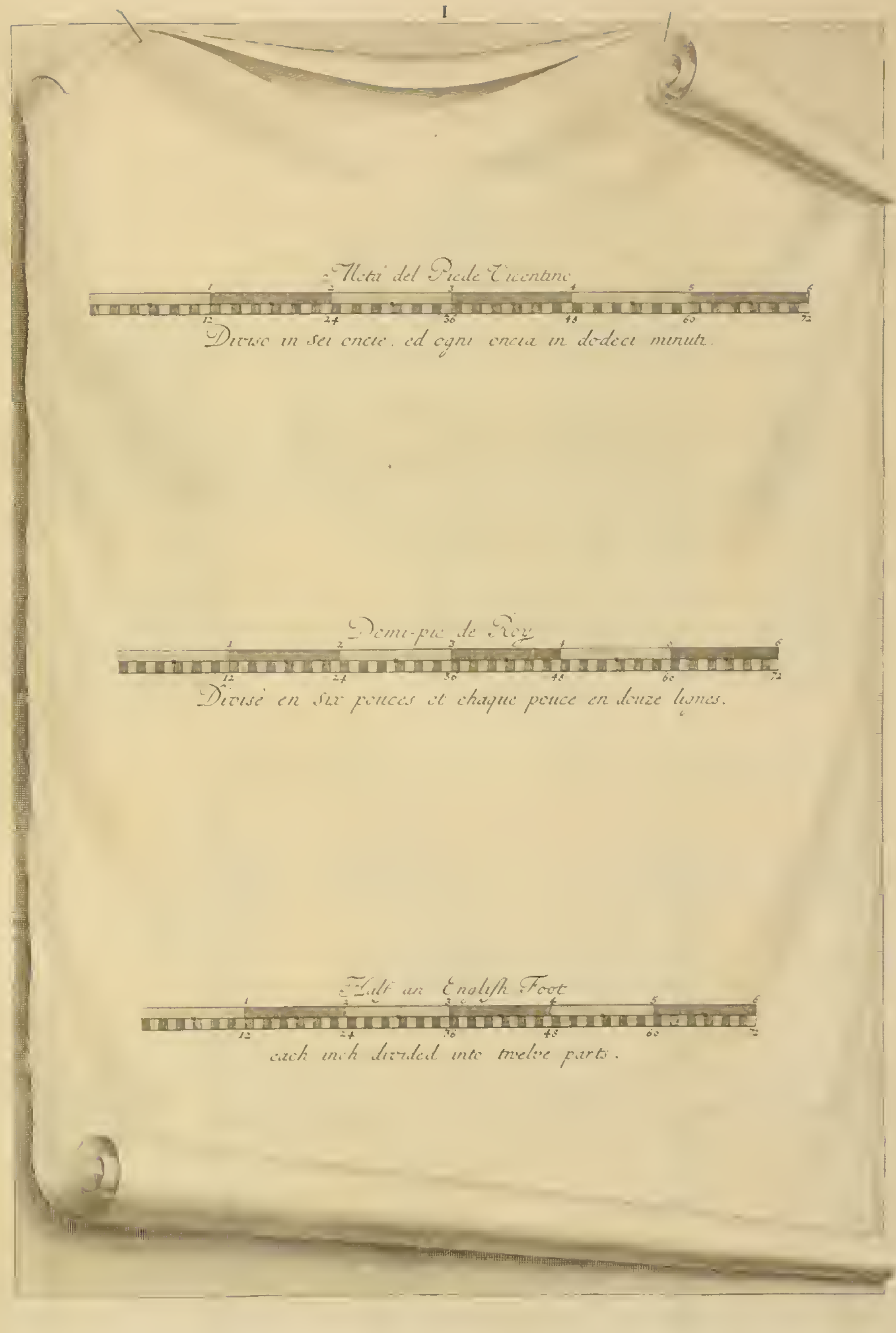
* *Plate* I. † *Plate* II.

I



Metà del Piede Vicentino

Divise in sei oncie, ed ogni oncia in dodeci minuti.

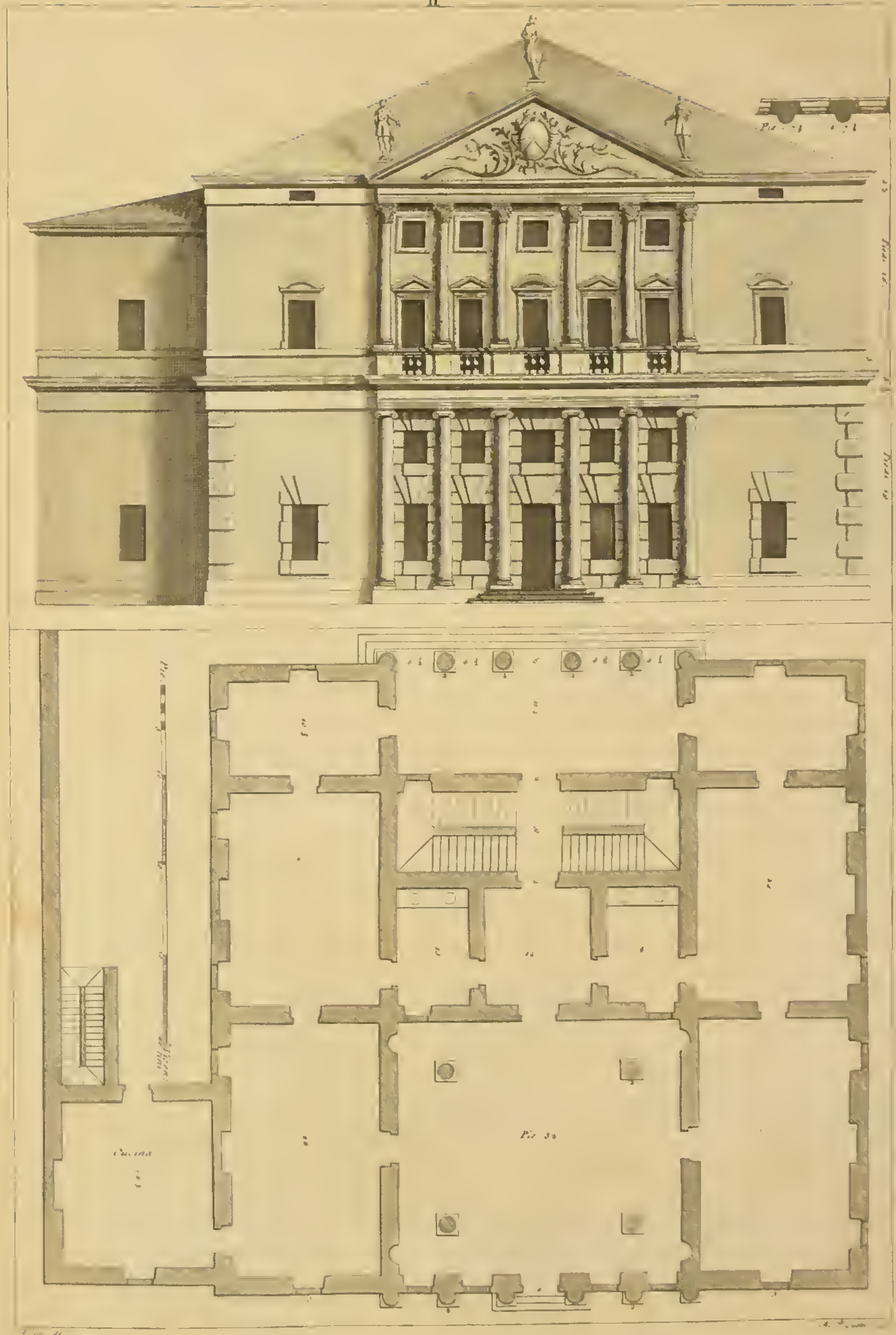
Demi-pie de Roy

Divisé en six pouces et chaque pouce en douze lignes.

Half an English Foot

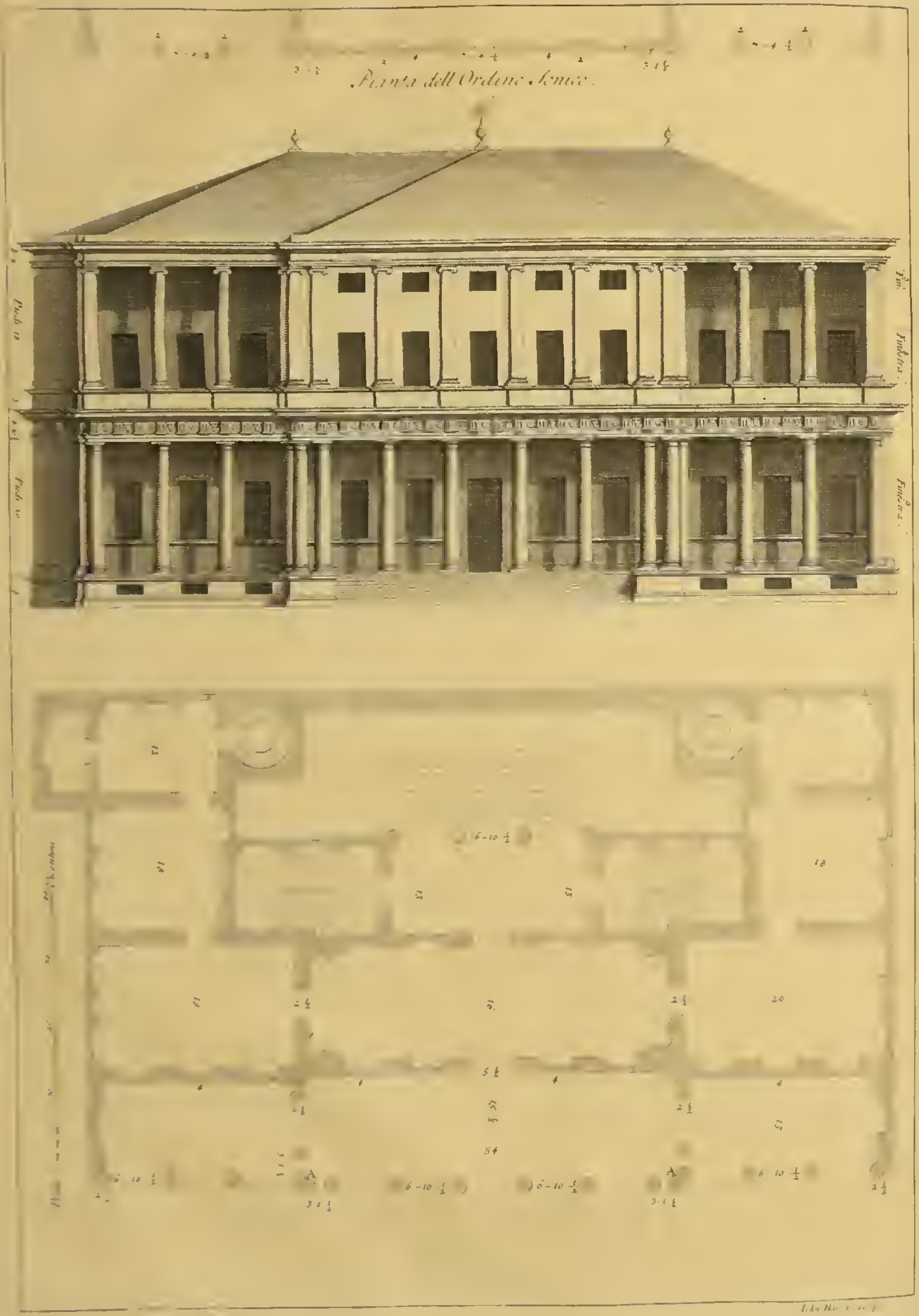
each inch divided into twelve parts.

II



III

Pianta dell'Ordine Jonico.



Town. The Ground-floor Wall of the fore-front is Ruſtick; and the Columns of the Veſtibule and Gallery backwards are Ionick. The firſt Chambers are arch'd; and the Arches of the largeſt are made according to the firſt method I ſpoke of, concerning the Arches or Vaults that are in places longer than broad. The Chambers of the ſecond Story are ceil'd, and are a little broader than the lower ones, becauſe of the diminution of the Walls; the height of the Ceilings being equal to their breadth. There are other Chambers higher, that may ſerve for Garrets. The Hall is ſo high that it reaches to the very Roof. The Kitchen is ſeparated from the body of the Houſe; but for all that it's very convenient. Near the great Stairs is the Houſe of Office, which tho in the body of the Houſe, does not give any ill ſmell, being in a place whereon the Sun does not ſhine, and having vents made in the thickneſs of the Wall from the bottom of the Pit to the very top of the Houſe, through which the offenſive ſmell is evaporated.

At *Vicenza*, on the place vulgarly called the Iſle, Count *Valerio Chiericato*, an honourable Knight of the ſame Town, caus'd the following deſign * to be executed. This Building has a great Portico or Gallery in the lower part, that takes up the whole fore-front of it. The Baſe of the firſt Order is five foot above the ground, which is ſo diſpos'd that the Cellars may be underneath it, as alſo all the other Offices intended for the conveniency of the Houſe; which had not ſucceeded ſo well, were they quite under ground; becauſe of the neighbourhood of the River, and that thereby the upper Stories ſhould be more airy, and have a far better proſpect. The Vaults or Arches of the great Rooms are rais'd according to our firſt method, or firſt rate of Arches: the leſſer ones are arch'd ſhell-like, and are as high as thoſe of the largeſt ſort: the Cloſets are alſo arch'd, and have Mezzanino's or half Stories above them. Every Arch is adorn'd with compartitions of Fret-work curiouſly wrought by *Bartolomeo Ridolfi*, a Sculptor of *Verona*, with ſeveral excellent pieces of Painting done by Meſſer *Domenico Rizzo*, and Meſſer *Battiſta Venetiano*, men very famous in thoſe Profeſſions. The Hall is in the middle of the Fore-front above, and occupies the middle of the Gallery beneath. Its height reaches to the Roof of the Houſe, and becauſe it projects a little outwards, its Angles are ſupported by double Columns. On each ſide of this Hall are Galleries, the Cielings of which are adorn'd with Pictures that are extremely fine, and make a glorious ſhow. The firſt order of the Fore-front is Dorick, and the ſecond Ionick. This following deſign * repreſents part of the Fore-front enlarg'd.

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* *Plate* III.

The next draughts † are of Count *Iſeppo de Porti*'s Houſe, a noble Family in the ſame City. This Building fronts two large Streets, and therefore has two Entries or Veſtibules wirh four Columns each, which bear an Arch to ſecure the ſuperincumbent weight. The Rooms of the firſt Story are arch'd; the height of thoſe on the ſides of the Veſtibule are after our ſecond method of Arches. The Rooms of the ſecond order are ceil'd, and all painted, as well as thoſe of the firſt Story, and ſet off with very rich Ornaments of Fret-work, made by thoſe Artiſts we ſpoke of before; and the Pictures are made by *Paul Veroneſe* a moſt famous Painter. From each of theſe Enrries one may go through a Paſſage into a Court that is to be ſurrounded with a Portico; the Pillars of which are 36 ½ Foot high, which is the whole height of the firſt and ſecond Stories. Behind theſe Columns are Pilaſters that are one Foot and 9 Inches diameter, and they project outwards ⅔, ſupporting the Pavement of the upper Gallery. This Court divides the whole Houſe into two parts. The fore part is for the Maſter and his Women, and the back part is deſign'd for the reception of Sttangers: that the one and the other may paſs to and fro with more freedom, a thing ro which the Antients, and particularly the *Grecians*, had a ſpecial regard. And moreover this way of dividing a Houſe may be alſo very convenient, in caſe the Children or any of the Family ſhould require privare Apartments. I plac'd the principal Stair-caſes under the Portico, which is juſt oppoſite to the midde of the Court; that thoſe who go up and down may neceſſarily have a proſpect of the moſt beautiful part of the Houſe, and that being in the middle, they may ſerve the two ſeparate parts of the Fabrick. The Cellars and other Offices are under Ground. The Stables are ſeparate from the body of the Houſe, and have their Entries under the Stair-caſes.

** The firſt of the two great draughts repreſents a part of the fore-front; and the ſecond, that ſide that fronts the Court.

*† The following Houſe is at *Verona*, which was begun by Count *Gianni Battiſta della Torre*, a Gentleman of the ſame City, whoſe Death put a ſtop to its finiſhing, tho it was very far advanc'd. The Entries are by the ſides of it, where there are paſſages ten Foot broad, which lead to the Courrs fifty Foot long,

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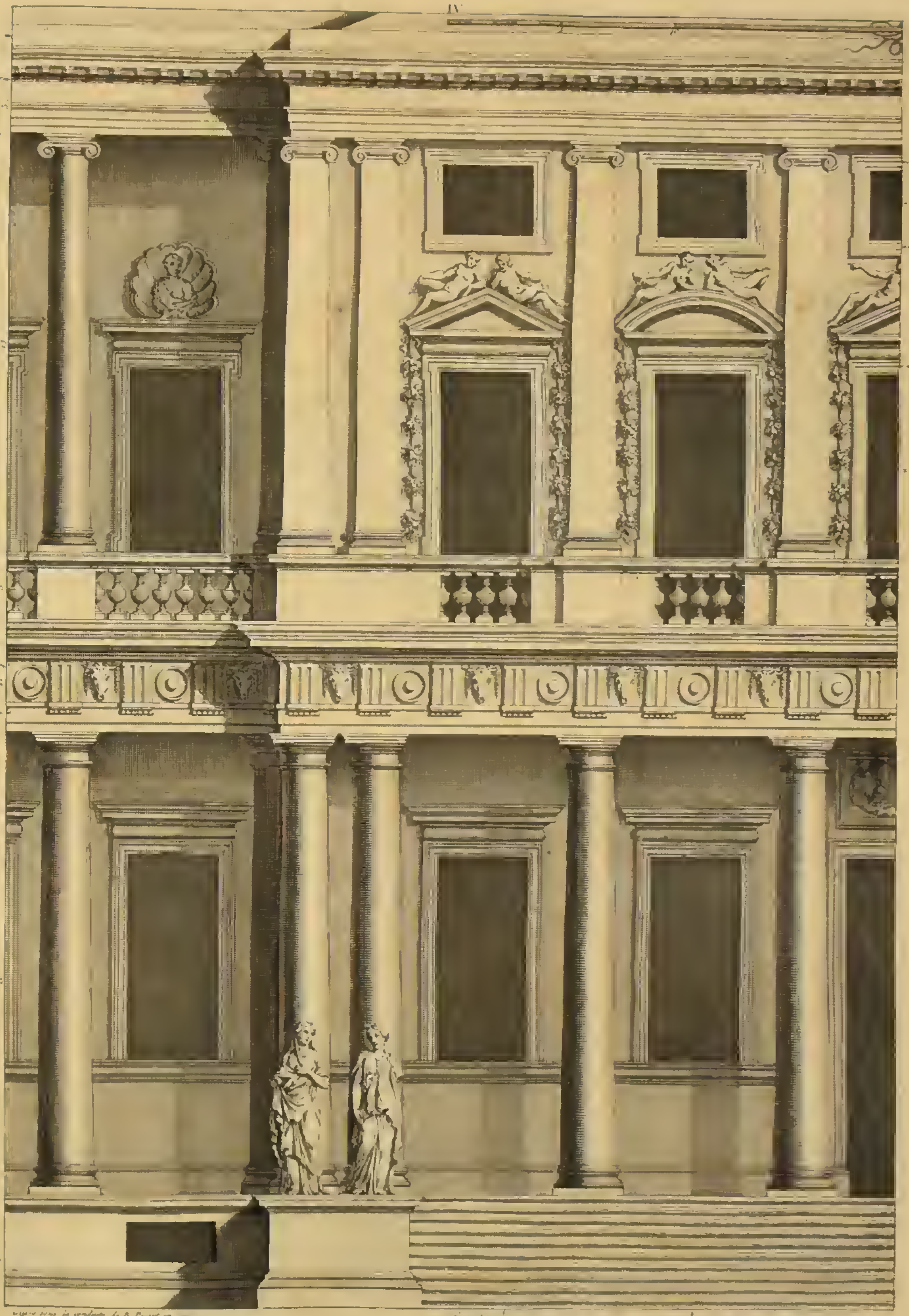
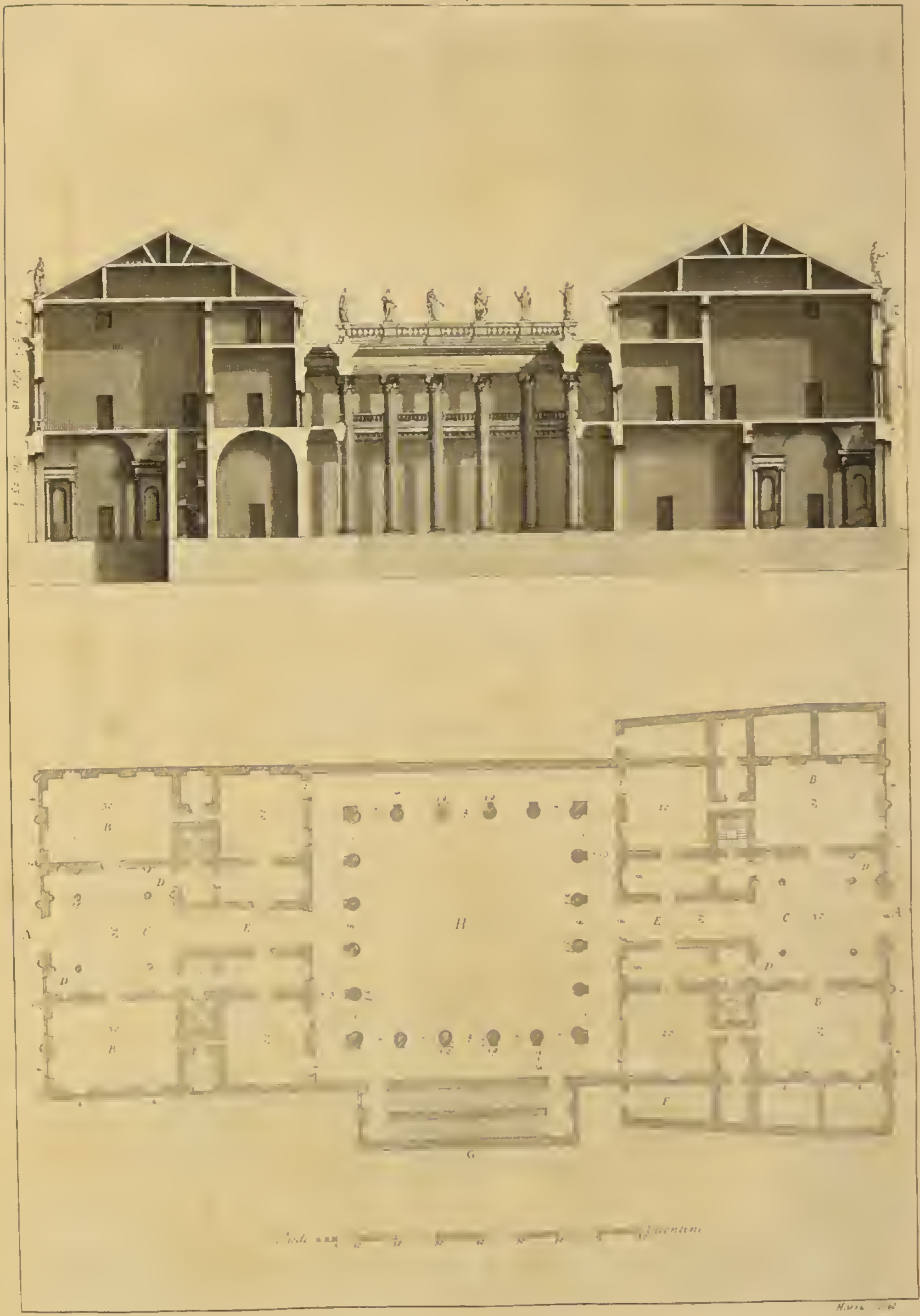
* *Plate* IV. † *Plate* V. ** *Plate* VI. *and* VII *† *Plate* VIII.

and

IV



Gravé sous la conduite de B. Picart en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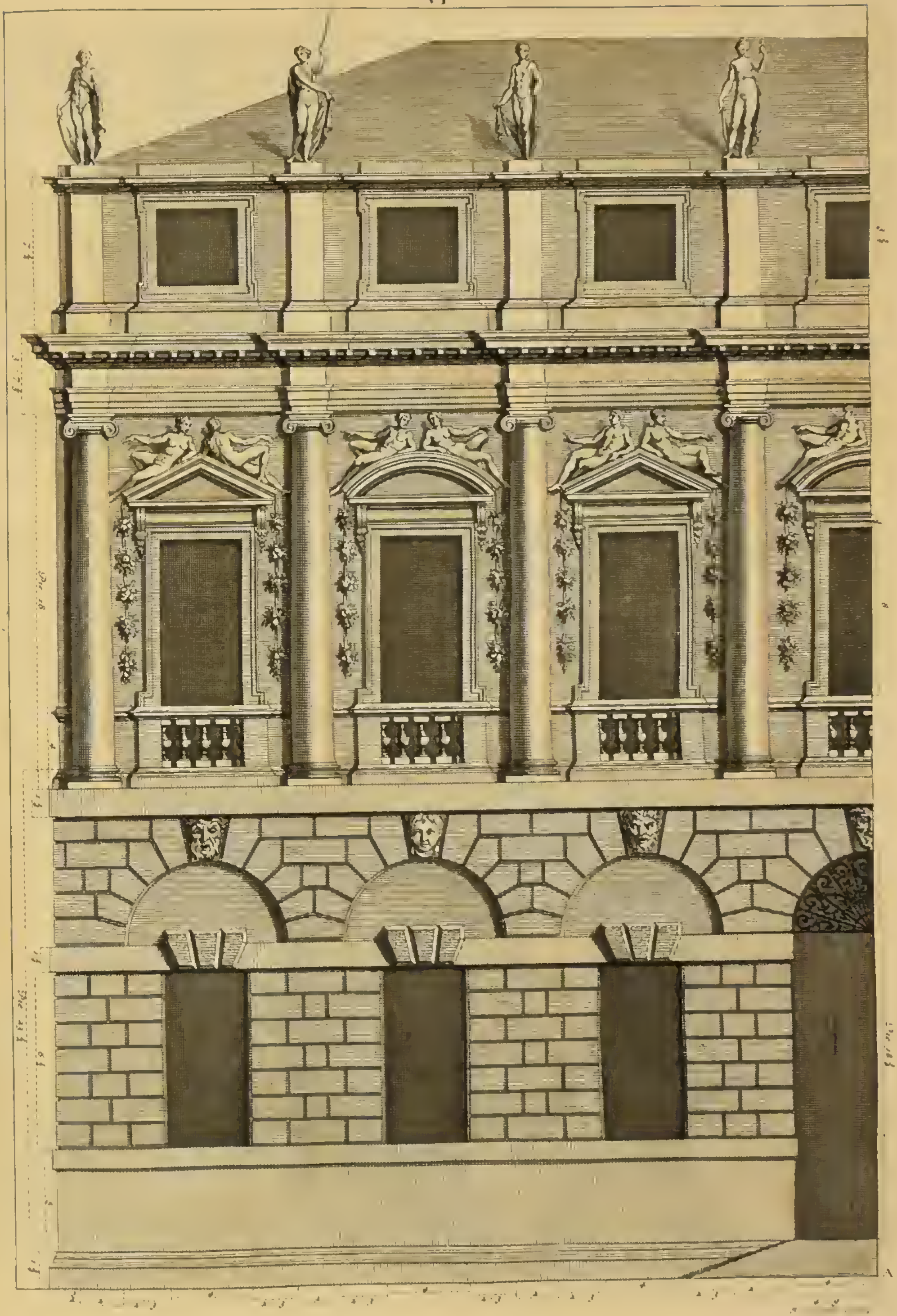

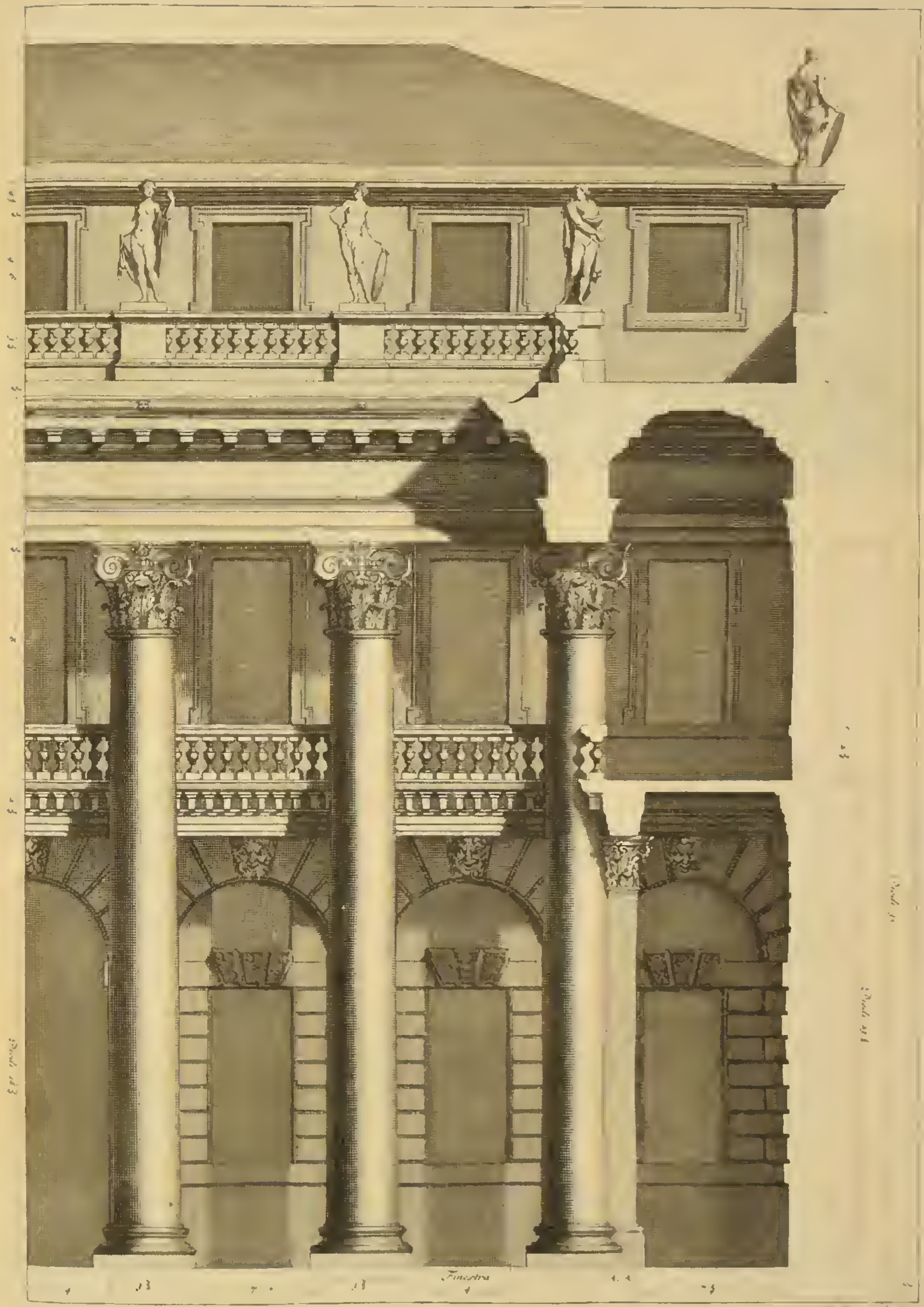
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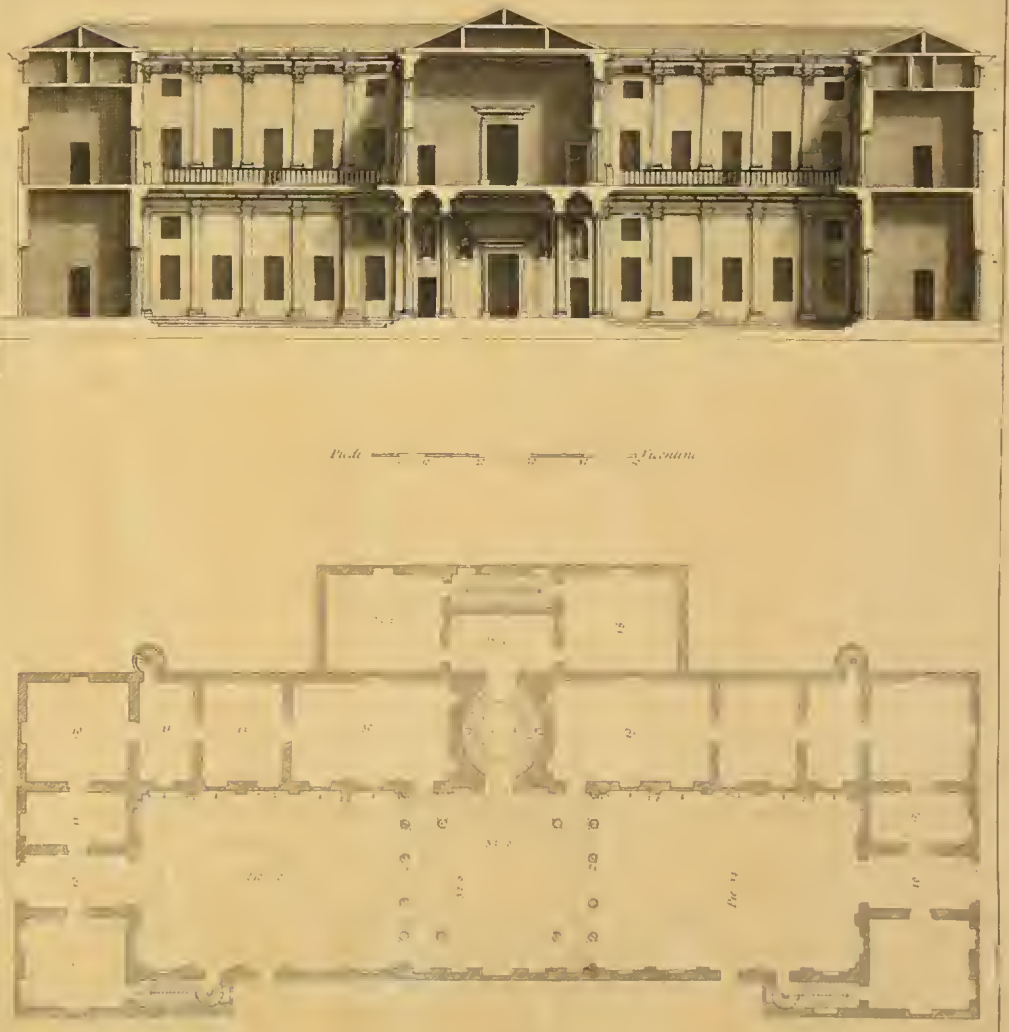
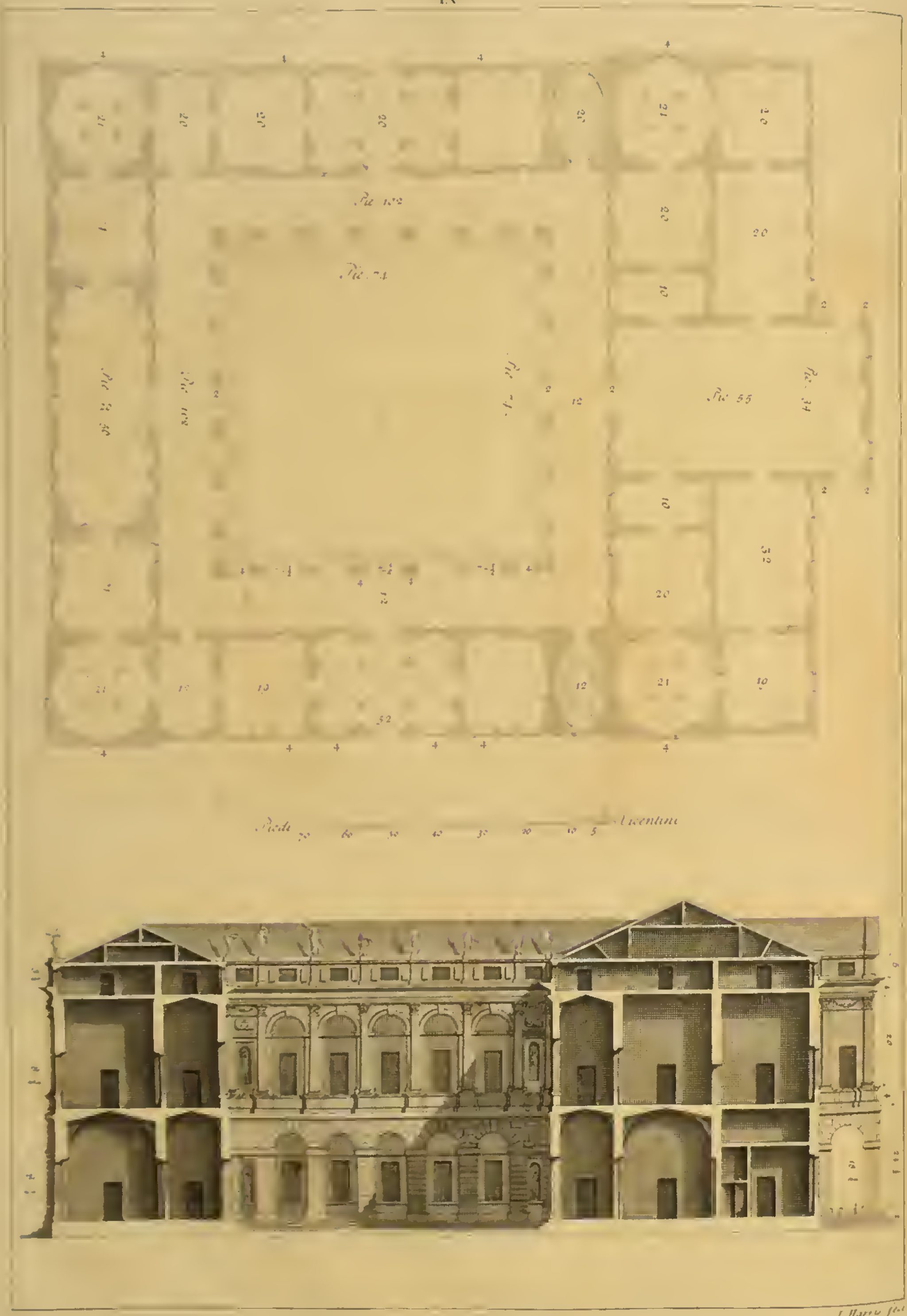
VIII

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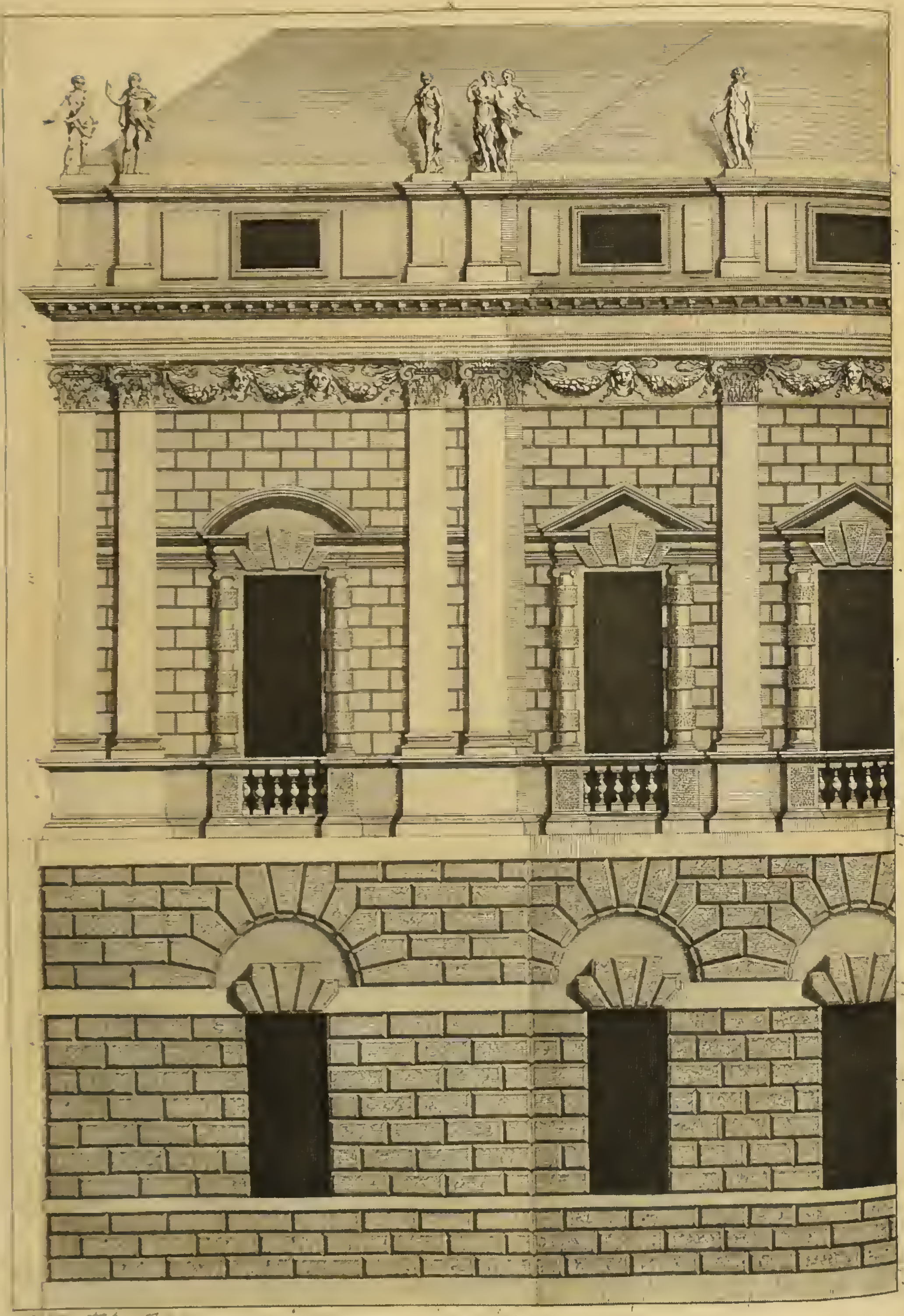
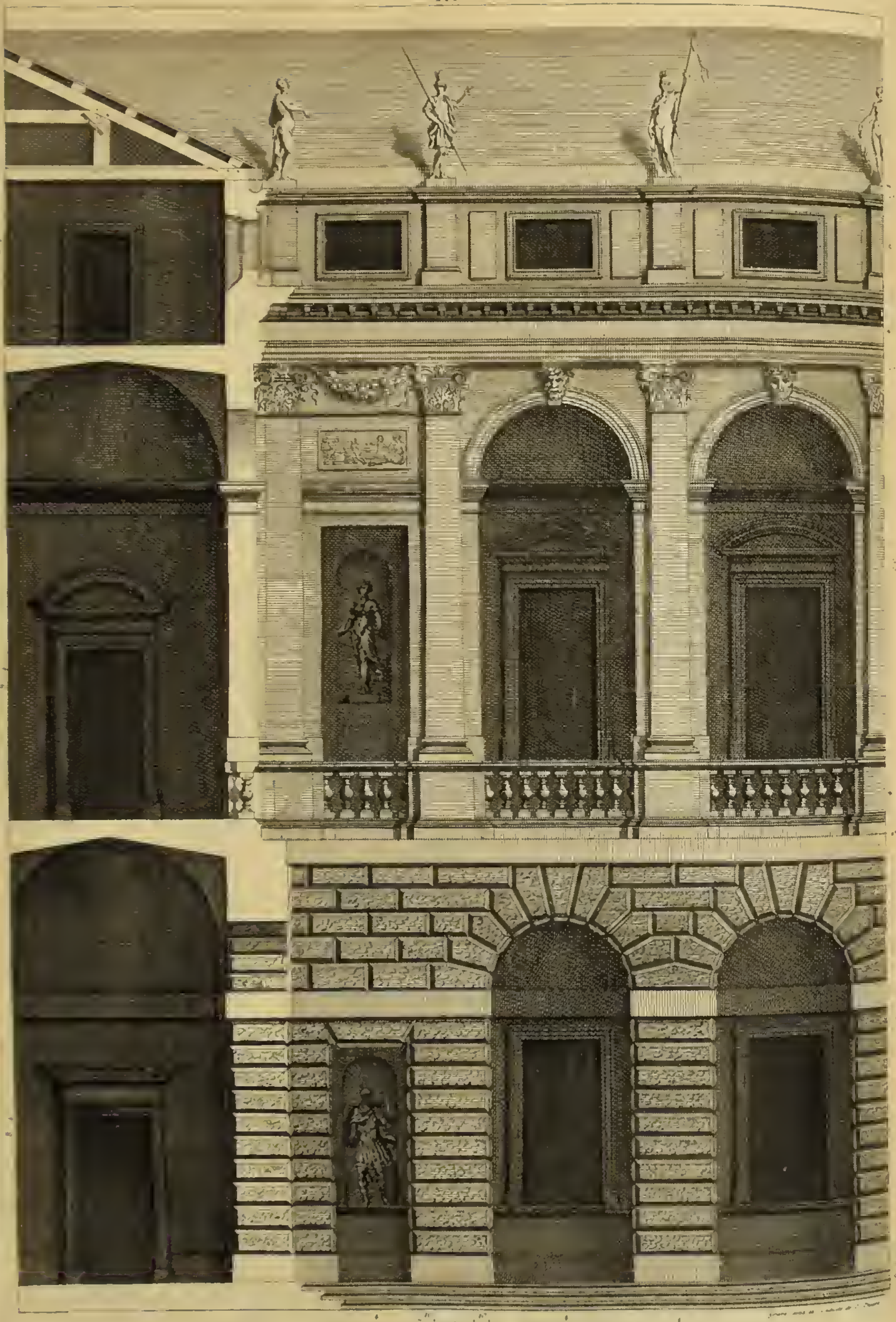


XI



and from thence to an open Hall, adorn'd with four Columns, which ſerve alſo to ſupport ſecurely the upper Hall. This ſame Hall leads to the Stair-caſe, which is of an eliptical form, and open in the middle. The ſaid Courts are ſurrounded with Balluſtrades, that are level with the ſecond Floor. The other private Stairs ſerve for a greater Conveniency throughout the whole Houſe. This Compartition ſucceeds extraordinary well in its Situation, which is long and narrow, and one of the Wings fronting the principal Street of the City.

* The following is the draught of a Building at *Vicenza*, belonging to Count *Octaviano de Thieni*, and was begun by Count *Marc Antonio*. This Houſe being ſituated in the heart of the Town, near the Market-place, I thought it was very proper to leave room for Shops on that ſide which fronts the Market; the Architect being oblig'd to have ſome regard for the advantage of thoſe that are at the expence of the Building, when the extent of the Ground will conveniently allow it. Every Shop has over it a half Story for the uſe of the Shop-keeper, and over theſe are the Maſter's Apartments. This Houſe, as one may ſay, ſtands in an Iſland, being ſurrounded by four Streets. The chief Entry, or Maſter-gate (as we may ſpeak) has a Gallery before it, and fronts the principal Street of the Town. The great Hall is to be above it, and will project as far out as the Piazza underneath. In the two wings are two other Entries with Columns in the middle, which ſerve rather to ſtrengthen the upper part, and render its breadth proportionable to its height, than for bare Ornament. By theſe Entries one paſſes to a Court ſurrounded with a Piazza, of which the firſt row of Pilaſters are Ruſtick, and the ſecond row of the Compoſite order. The Rooms at the four corners are octangular, and have a good effect, both for their beauty, and the ſeveral conveniencies to which they may ſerve. The Chambers that are now finiſh'd have been adorn'd with very fine Stuccatures made by Meſſer *Aleſſandro Vittoria*, and Meſſer *Bartolomeo Ridolfi*, and painted by *Anſelmo Canera*, and *Bernardino India*, both of *Verona*, and not inferior to the beſt Maſters in their profeſſion. The Cellars and ſuch like places are under Ground, becauſe the Building is ſituated in the higheſt part of the Town, where there is no great fear of Water.

† The firſt of the two great draughts following repreſents a part of the fore-front of the Houſe, the ſecond that ſide which fronts the Court.

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* *Plate* IX. † *Plate* X. *and* XI.

The Counts *Valmarana*, of a moſt noble Family of the ſame place, have alſo built according to the following deſigns, * not only for their own honour and conveniency, but alſo for the ornament and glory of their Country. They have left nothing wanting which may be deſir'd in the enriching of ſuch a Building either for Stuccature or Painting. This Houſe is divided into two parts by a Court in the middle, about which there is a Corridor with Balluſters, which leads from the fore part of the Houſe to that which is behind the Court. The Chambers of the firſt Floor are arch'd; and the upper ones are ceil'd, of which the height is equal to their breadth. The Garden before the Stables is 120 Foot long by 60 Foot wide. I think this deſcription is ſufficient for what concerns this Houſe, all the reſt being eaſily ſeen in the Plan of it, where I have ſet down the meaſure and ſize of every part, in the ſame manner as in the foregoing ones.

† The draught that follows is one half of the fore front on a large Scale.

Amongſt ſeveral worthy Gentlemen of *Vicenza*, there is Signor *Paolo Armerico*, who was Referendary to the Popes *Pius* the fourth and fifth, and deſerv'd to be made a Citizen of *Rome*; as well as all his Family for his ſake. This Gentleman, after having travell'd a long time to improve himſelf, being come to ſettle at laſt in his own Country, after the death of all his Friends, choſe his abode at a Country-houſe he had on a Hill, within leſs than half a Mile of the Town, where he ſince has built the following Houſe **, which I have not plac'd among the Country-houſes, becauſe of its proximity to the Town, to which one may properly ſay it belongs. Its Situation is as advantageous and delicious as can be deſir'd, being ſeated on a hillock of a moſt eaſy aſcent, at the foot of which runs the *Bacchilione*, a navigable River. On the other ſide, it is ſurrounded by ſeveral Hills, that ſeem to form a great Theatre, and which beſides are all of them cultivated, being very fertile, abounding with excellent Fruits and Vineyards: ſo that having the advantage of fine Proſpects on all ſides, ſome confin'd, ſome more remote, and ſome farther than the ſight can reach, I have made Portico's to all the fore fronts; under the which, and alſo of the Hall, I have contrived Rooms for the uſe and conveniency of thoſe of the Family. The Hall which is circular, and plac'd in the middle of the Building, receives its Light from the top. The Cloſets have *Mezzanino's*. Above the great Rooms ſurround-

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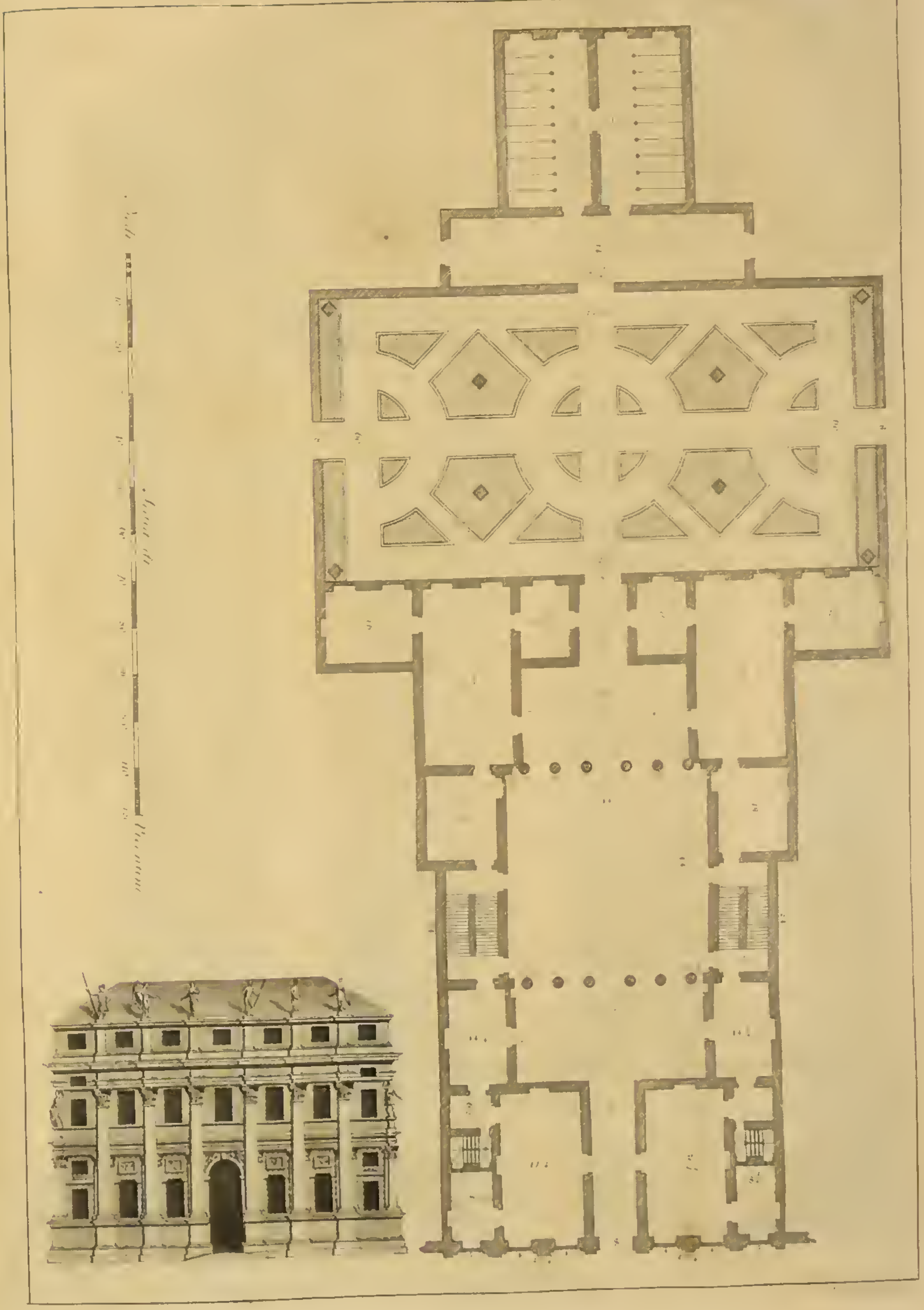
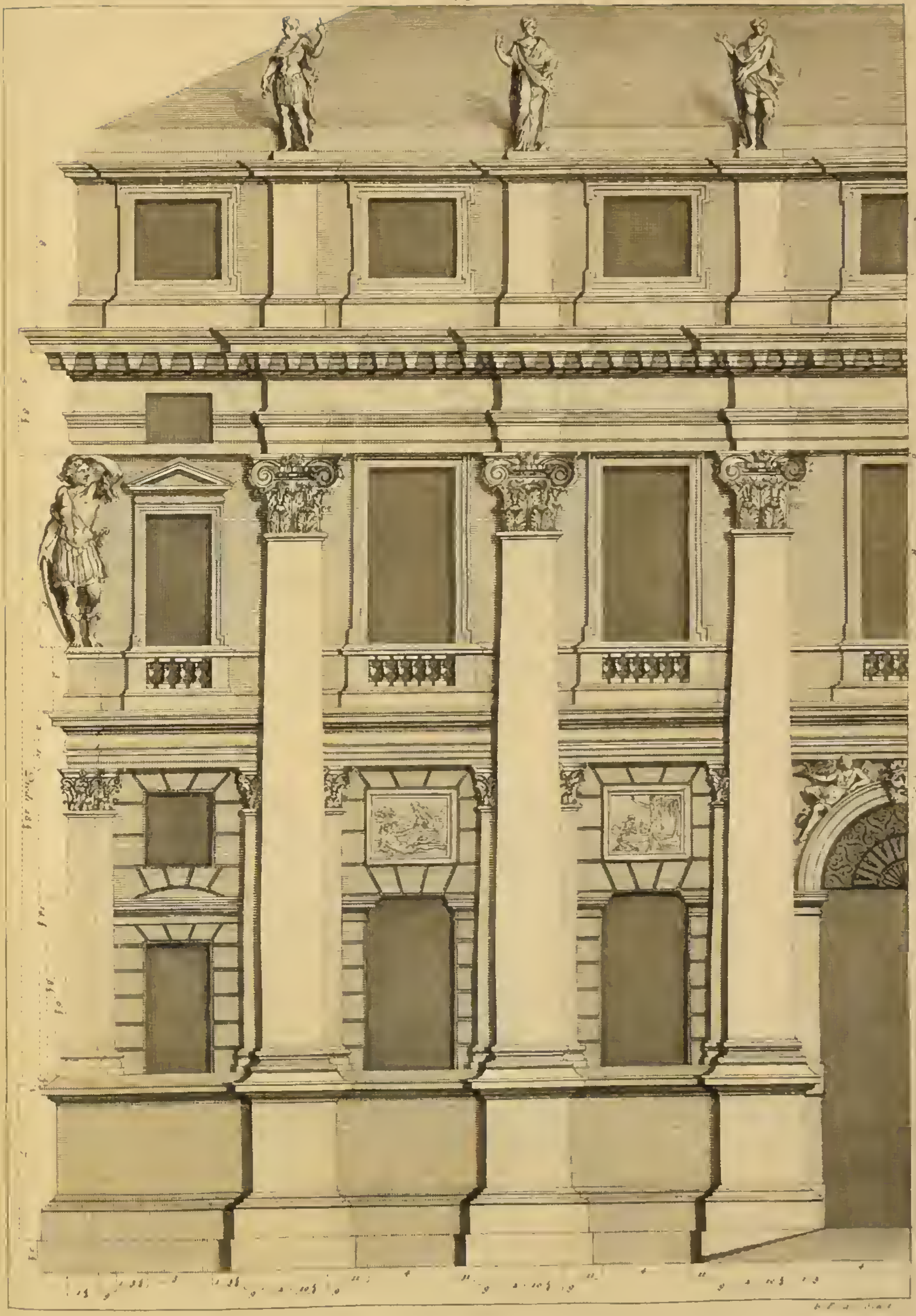
* *Plate* XII. † *Plate* XIII. ** *Plate* XIV. *and* XV.

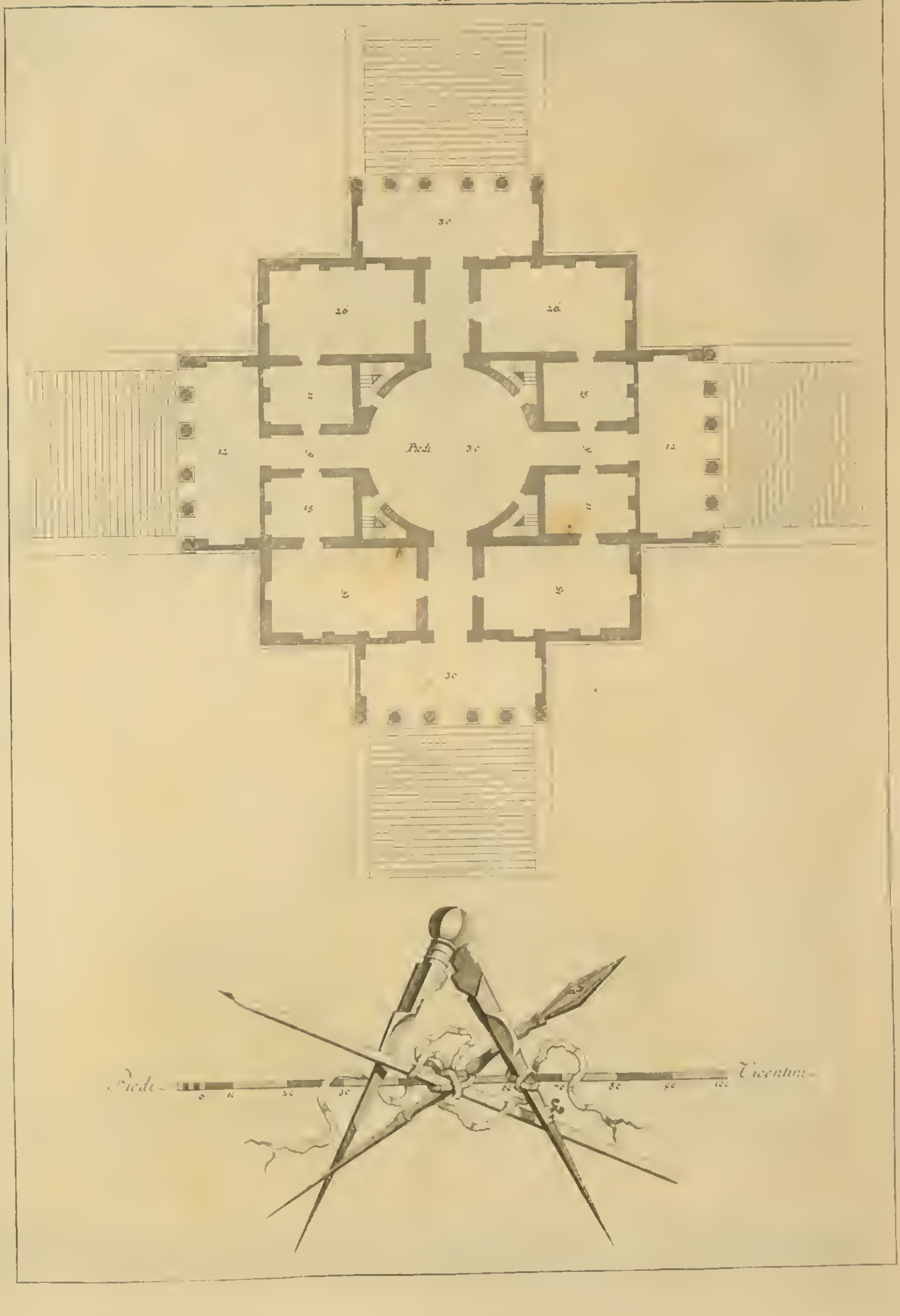
XII



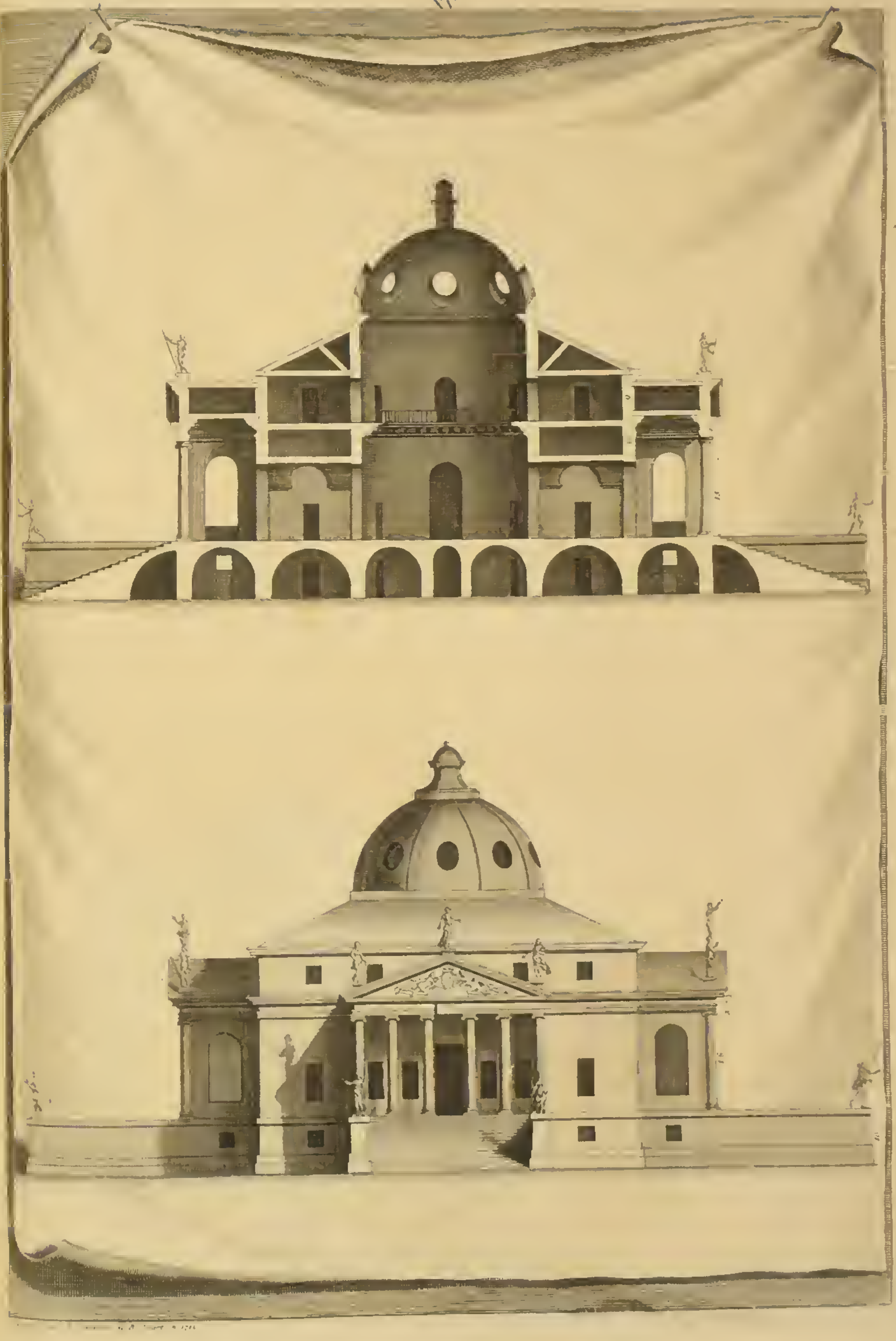
XIII



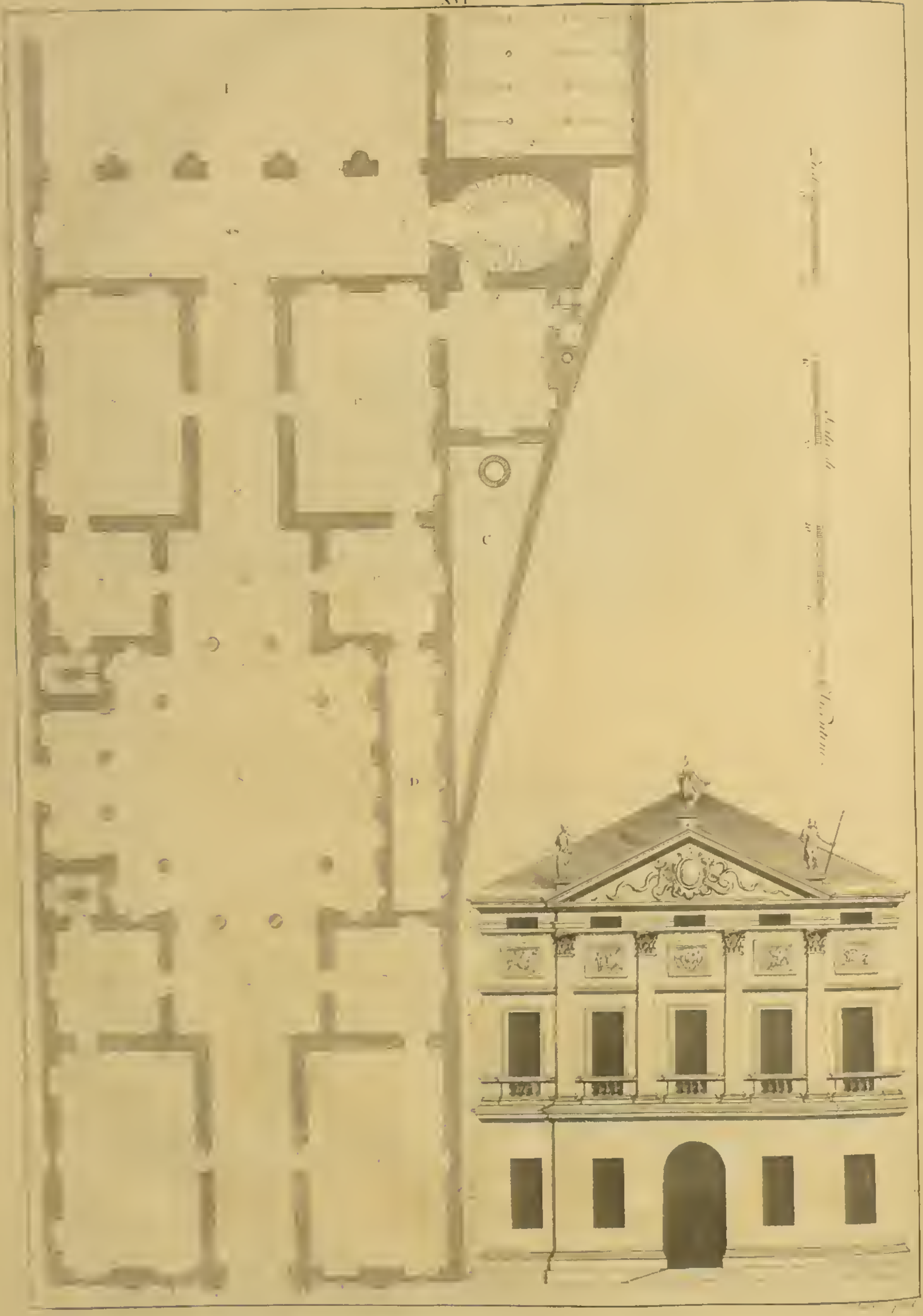
XIV


Piedi 30
Piedi Vicentini

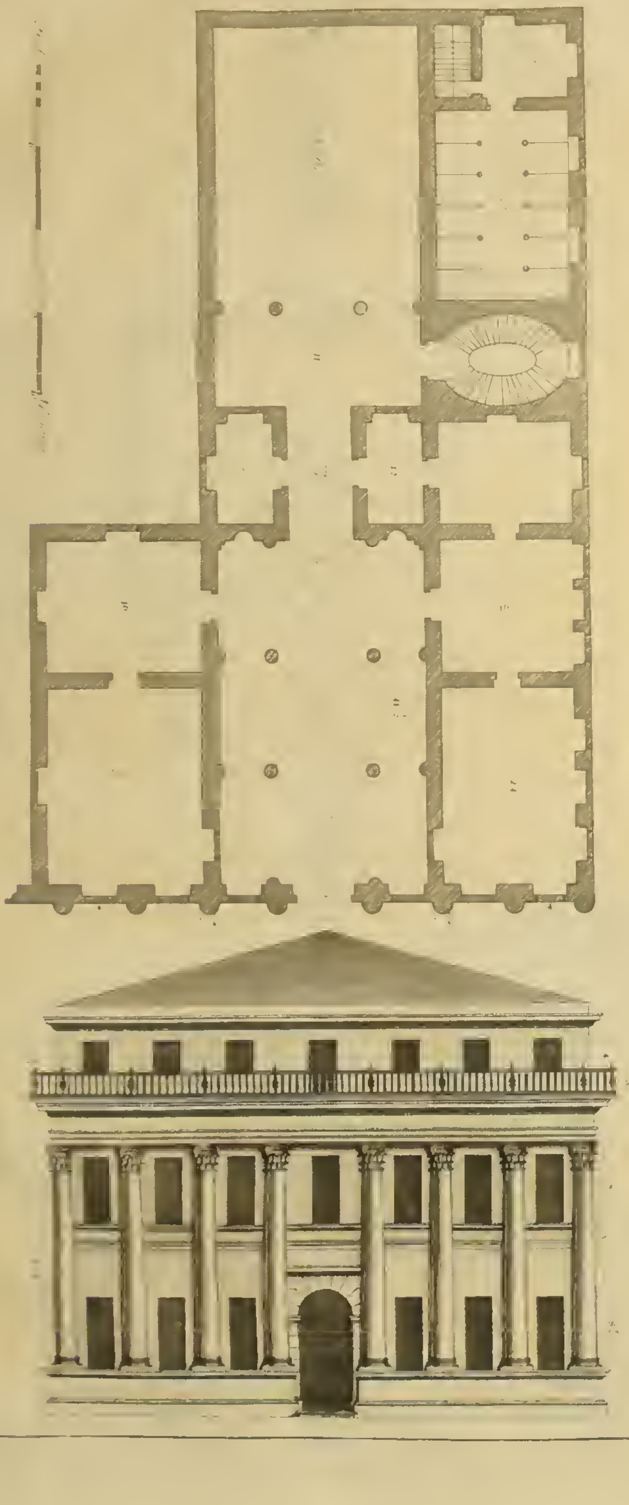
V



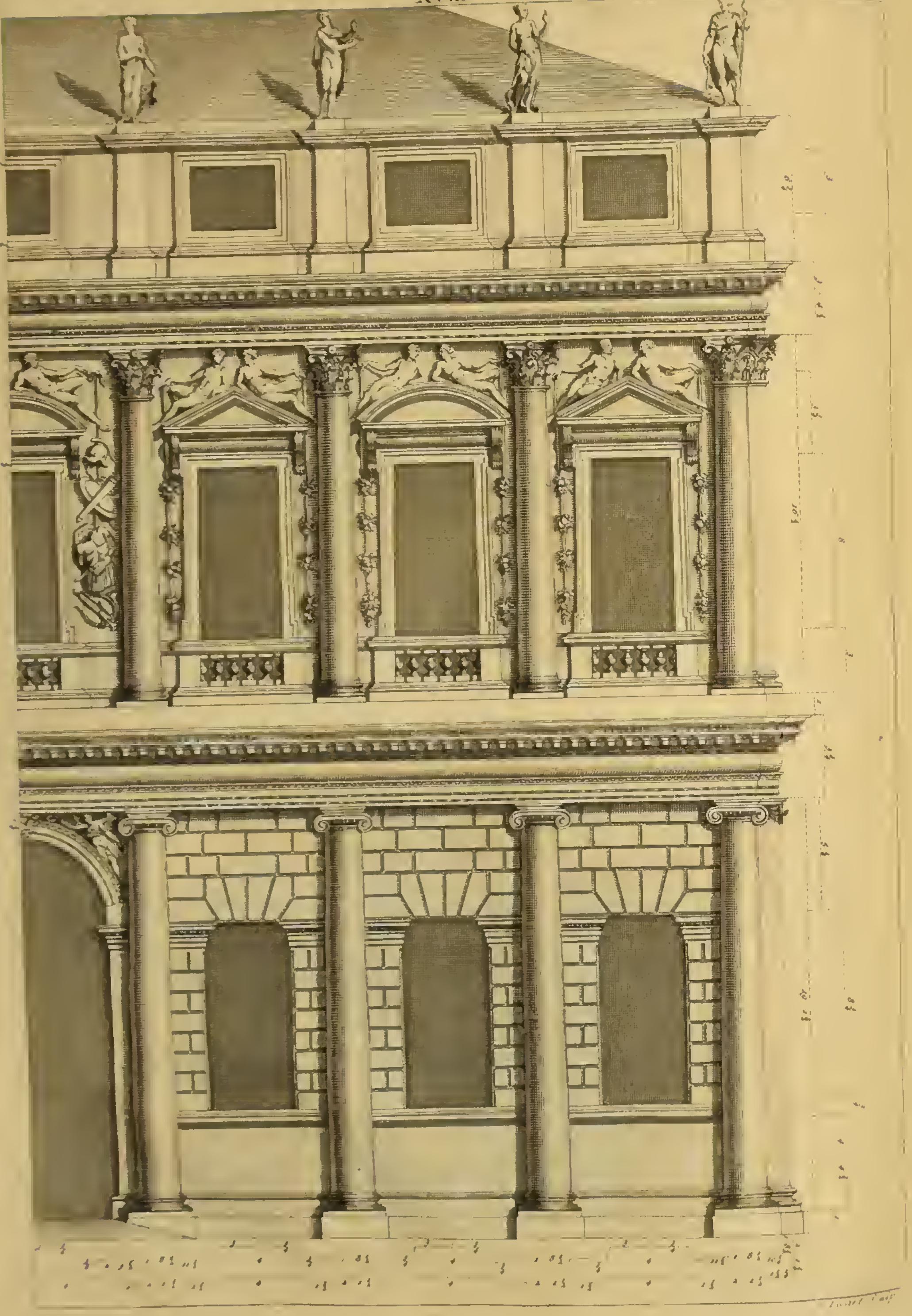
XVI



XVII



XVIII



ing the Hall (the Arches of which are after our firſt method) there is a Plat-form to walk on 15½ Foot broad. On the Pedeſtals, which ſupport the ſteps of the four Portico's, are Statues made by Mr. *Lorenzo Vicentino*, an excellent Sculptor.

Signor *Guioglio Capra*, a worthy Gentleman of the ſame Town, for the honour of his Country rather than for his own conveniency, has made all the preparations neceſſary, and even begun to build the following deſign *, which is advantagiouſly ſituated, in the principal Street of the Town. This Building is to have Courts, Galleries, Halls, and Chambers of all ſorts, ſome being large, ſome little, and others of a middle ſize. The form of it is beautiful and diverſify'd, ſo that it will be magnificent and noble, ſuitable to the dignity and generoſity of its Maſter.

C. *A little open Court.*
D. *Another little Court.*
L. *The great Court.*
S. *A Hall which is ſupported with Columns underneath, but having none above, makes it appear much lighter.*

Count *Montano Barbarano*, having a place to build on in *Vicenza*, deſir'd me to give him the following deſign †, which not ſuiting the place at firſt, I was oblig'd to make ſome alterations in it; but that Gentleman having ſince bought the ground that was wanting, the firſt deſign has been entirely executed. The Stables and Servants Rooms on the one ſide anſwer to the Womens Apartment, to the Kitchen, and other convenient Offices on the other ſide, as may be ſeen in the draught. This Building is ſo far advanc'd, that they are raiſing the Fore-front, which is made according to the following deſign in great **. I could not furniſh the Printer ſoon enough with the plan of the laſt draught, according to which it was finally reſolv'd to build it, and that the Foundations of it are already laid. The Entry has ſome Columns which ſupport an Arch for the reaſons before given. On each ſide there are two Chambers, which are a ſquare and half in length, at the end of which are two ſquare ones, and after them two Cloſets. Oppoſite to the entry is a paſſage that leads to a Portico towards the Court. On each ſide of this ſame paſſage is a Cloſet with a *Mezzanino* above it, to which one goes by the principal Stair-caſe. All the Arches of theſe places are twenty one Foot and a half high. The Hall above, and all the other Rooms are ceil'd, except the Cloſets, which are arch'd as high as the Cielings of the Rooms. The Columns of the fore-front have their Pedeſtals, and ſupport a Corridor, to which one enters by the Soffit. The front is not to be after this firſt method, as I have ſaid before, but as it is in the next deſign * drawn upon a larger Scale.

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* *Plate* XVI. † *Plate* XVII. ** *Plate* XVIII.

CHAP. IV.

Of the Tuſcan Atrium, *or Hall.*

NOW that I have given the deſigns of ſome Houſes I have erected in Cities, I think it proper to diſcharge my ſelf of my promiſe, in deſcribing ſome of the principal places of which the Houſes of the Antients were compos'd. I ſhall begin with the *Atrium*, as being one of the moſt principal parts, and come afterwards to the other adjoining parts of the ſaid Buildings, and laſtly to their common Halls. *Vitruvius* in his ſixth Book obſerves that there were five ſorts of theſe *Atriums* among the antients, *viz.* the *Tuſcan*, that of four Columns, the *Corinthian*, the *Teſtudinated*, and the open one, of which I intend not to ſpeak. The following deſigns † are for the *Tuſcan Atrium*. The breadth of this is equal to the two thirds of its length. The breadth of the record Room is but two fifths of that of the *Atrium*, which is ſquare. From this one paſſes into the Periſtylos, which is a Court ſurrounded with Pillars, a third longer than its breadth. The breadth of the Piazza or Portico (*that is, the ſpace from the Wall to the Pillars*) is equal to the height of the Columns. Oppoſite to the wings of the *Atrium* one might contrive little Halls, having a proſpect over the Gardens; and if they are made as they are repreſented in the draught, their Columns ſhould be *Ionick* about twenty foot high, and then the Piazza's wou'd be as broad as the diſtance between each Column. Above there ſhou'd be ſome other Columns of the *Corinthian* Order, a fourth part leſs than thoſe below, between whom there ſhou'd be Windows to give light, in imitation of the *Corinthian* Halls, *as one may ſee hereafter, Plate* XXX. The opening above ſhou'd be without any cover at all, and ought to be ſurrounded with a Baluſtrade. If the ground will allow it, one may make more or leſs Lodging than I have here drawn, according as the uſe and conveniency of the maſter ſhall require.

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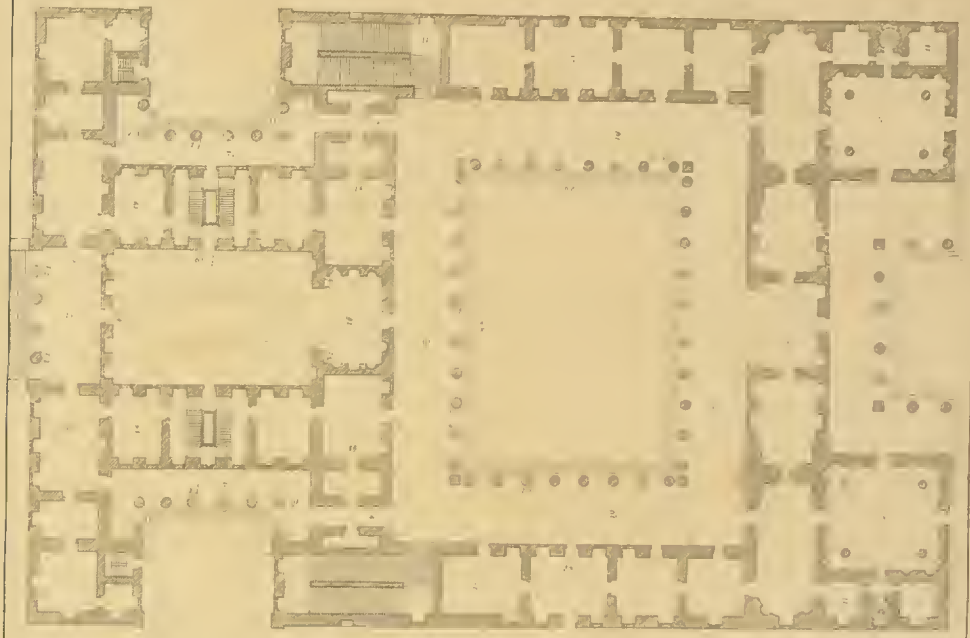
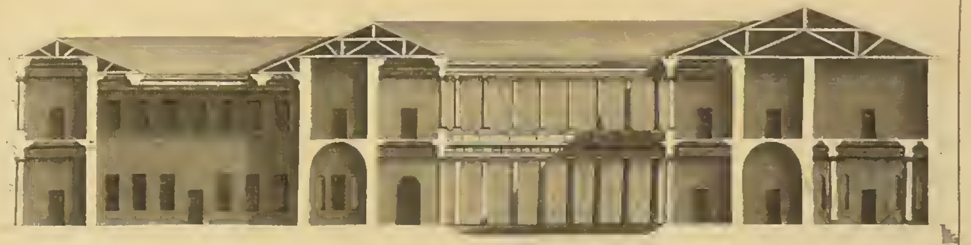
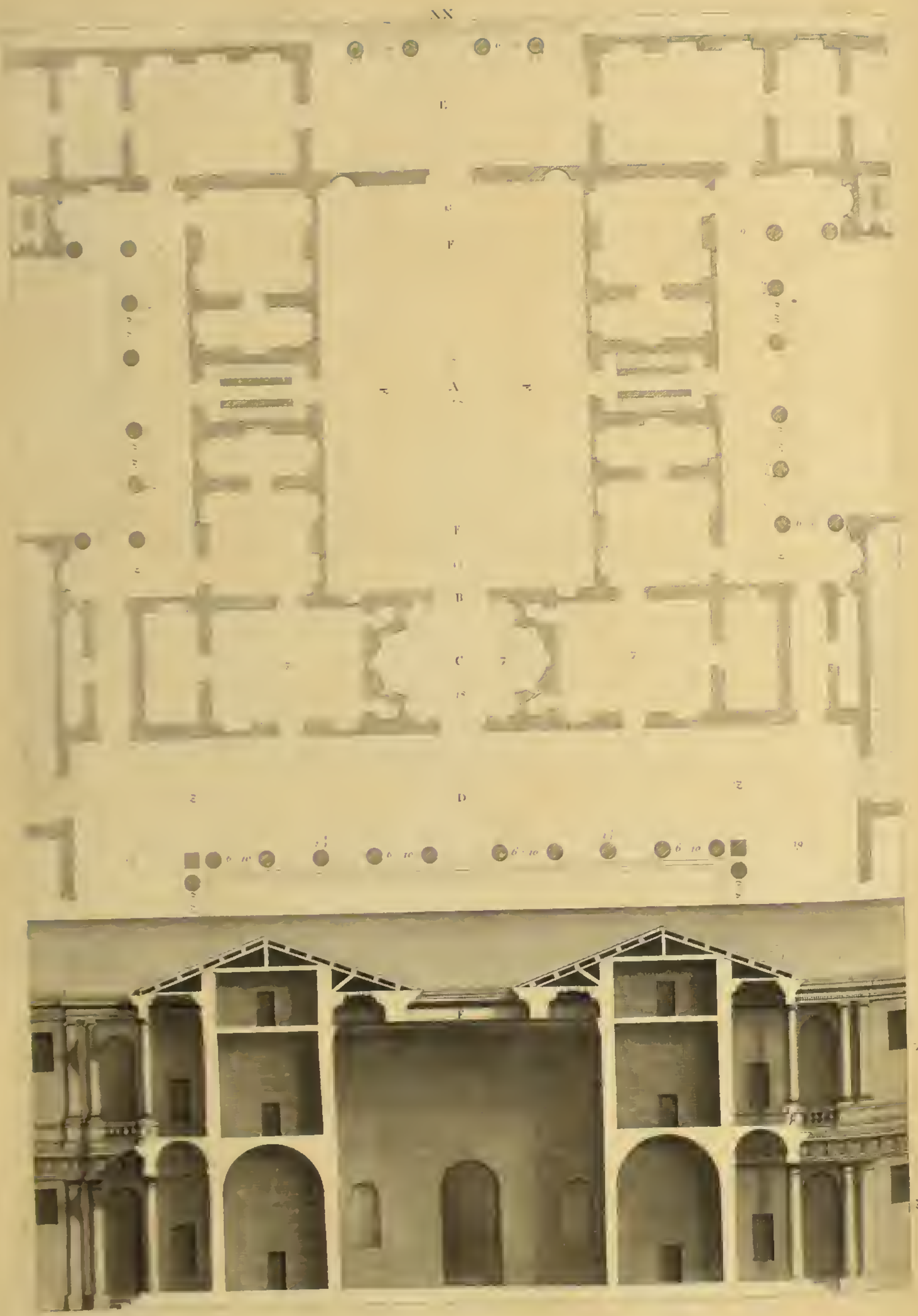
* *Pl.* XVIII † *Pl.* XIX.

The



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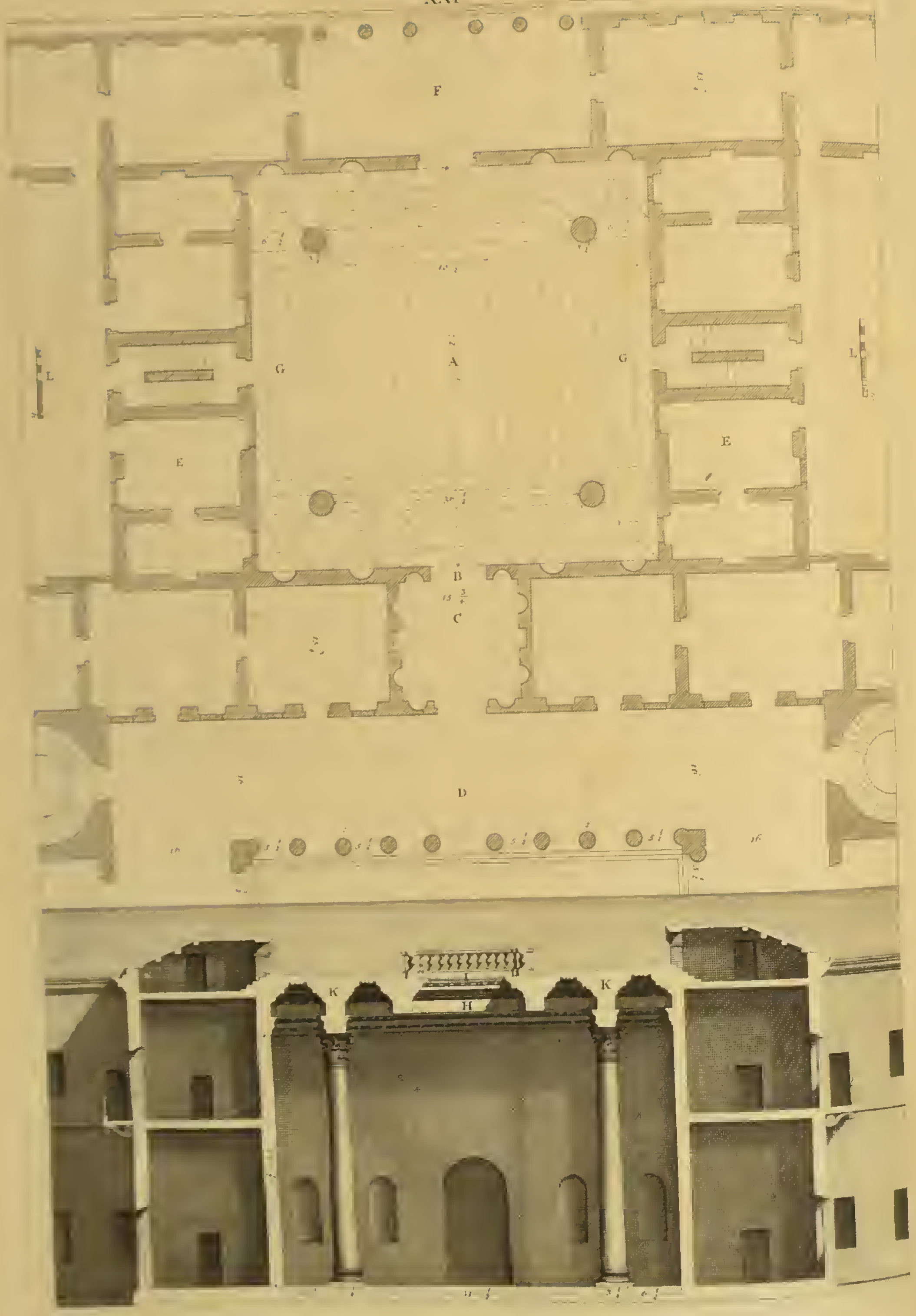
XXI



The following draught [*] upon a larger Scale repreſents this *Atrium.*

A. Atrium.
B. *Door to the Record-room.*
C. *Record-room.*
D. *Portico of the* Periſtylos.
E. *Portico, or Gallery before the* Atrium, *which may be called the Veſtibule.*
F. *Freeze and Cornice on the Breſt-ſummer, ſupporting the top of the* Atrium.

CHAP. V.

Of the Atrium *with four Columns.*

THE following deſign [†] repreſents the *Atrium* with four Columns; the length of which being divided into five equal parts, the breadth takes up three. The Wings (*that is, the ſpace between the Wall and the Columns, which is not comprehended in the breadth of the* Atrium) have in breadth a fifth part of the height of the Columns. The Columns are *Corinthian*, and their diameter is equal to the breadth of one half of the Wings. The opening above is the third part of the breadth of the ſaid *Atrium*, and the breadth of the *Charter-room* is half of the breadth of the ſame *Atrium*, and has the ſame length. From which *Atrium* one paſſes through the Charter-room into the *Periſtylos*, which is a ſquare and a half in length. The Columns of the firſt order are *Dorick*, and the breadth of the Portico is equal to the height of thoſe Columns. Thoſe of the ſecond order are *Ionick*, and a fourth part leſs than the firſt, under which there is a Pedeſtal, two Foot and three quarters high.

A. Atrium.
B. *Door to the Charter-room.*
C. *Charter-room.*
D. *Portico of the* Periſtylos.
E. *Chambers near the* Atrium.
F. *Portico through which one enters into the* Atrium.
G. *Wings of the* Atrium.
H. *Freeze under the Cornice of the* Atrium.
I. *Opening on the top of the* Atrium, *with a Baluſtrade round it.*
K. *Solid above the Columns.*
L. *Scale of ten Foot.*

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[*] *Plate* XX.
[†] *Plate* XXI.

CHAP. VI.

Of an Atrium *made after the* Corinthian *manner.*

THE Edifice which I am going to deſcribe * is at *Venice* in the Convent nam'd the *Charity*, belonging to the regular Canons. I have endeavour'd to make this Houſe reſemble thoſe of the Antients, and in order thereto, I have built a *Corinthian Atrium* in it, the length of which is the diagonal of its ſquare. The wings (*that is, the ſpaces between the Wall and the Columns*) have in breadth two ſevenths of the length of the *Atrium*, that is, one for each Wing. The Columns are *Compoſite*, and are three Foot and a half in diameter, and 35 Foot high. The aperture in the middle is one third of the breadth of the *Atrium*, taken between the Columns. Above the *Atrium* there is a Terraſs level to the third order of the Cloiſter, where the Cells of the Canons are. The Veſtry is on one ſide, near the *Atrium*, round about which there is a *Dorick* Cornice which ſupports an arch'd cieling. The Columns that are there, bear up that ſide of the Cloiſter's Wall, which in the upper part divides the Chambers or Cells from the Galleries. The veſtry ſtands in the place where the antients kept the Images of their Anceſtors, and which they call'd the Record-room; tho to ſuit with the conveniency of the place, I have made the wings of the *Atrium* ſerve for that uſe, oppoſite to the Veſtry in the *Chapter-hall* anſwerable to one another. On the ſide near the Church, there is an *Eliptical*, or oval Stair-caſe, open in the middle, which is very commodious and agreeable. From the *Atrium* one enters into the Cloiſter, where there are three Orders of columns one over the other. The firſt is *Dorick*, and its columns project more than one half from the Pilaſters. The ſecond is *Ionick*, and the columns are a fifth part leſs in height than the former. The third is *Corinthian*, and diminiſhes alſo a fifth in the height of the ſecond. In this laſt range, inſtead of Pilaſters, there is a contiguous Wall; and over the center of the Arches of the two firſt orders, are Windows which give light to the Entries of the Cells, the arch'd ceilings whereof are made of cane, to diſcharge the Walls. Oppoſite to the *Atrium* and the Cloiſter, beyond the Stair-caſe, is the Refectory, or large Dining-room, which is two ſquares in length, and rais'd to the third Story of the Cloiſter.

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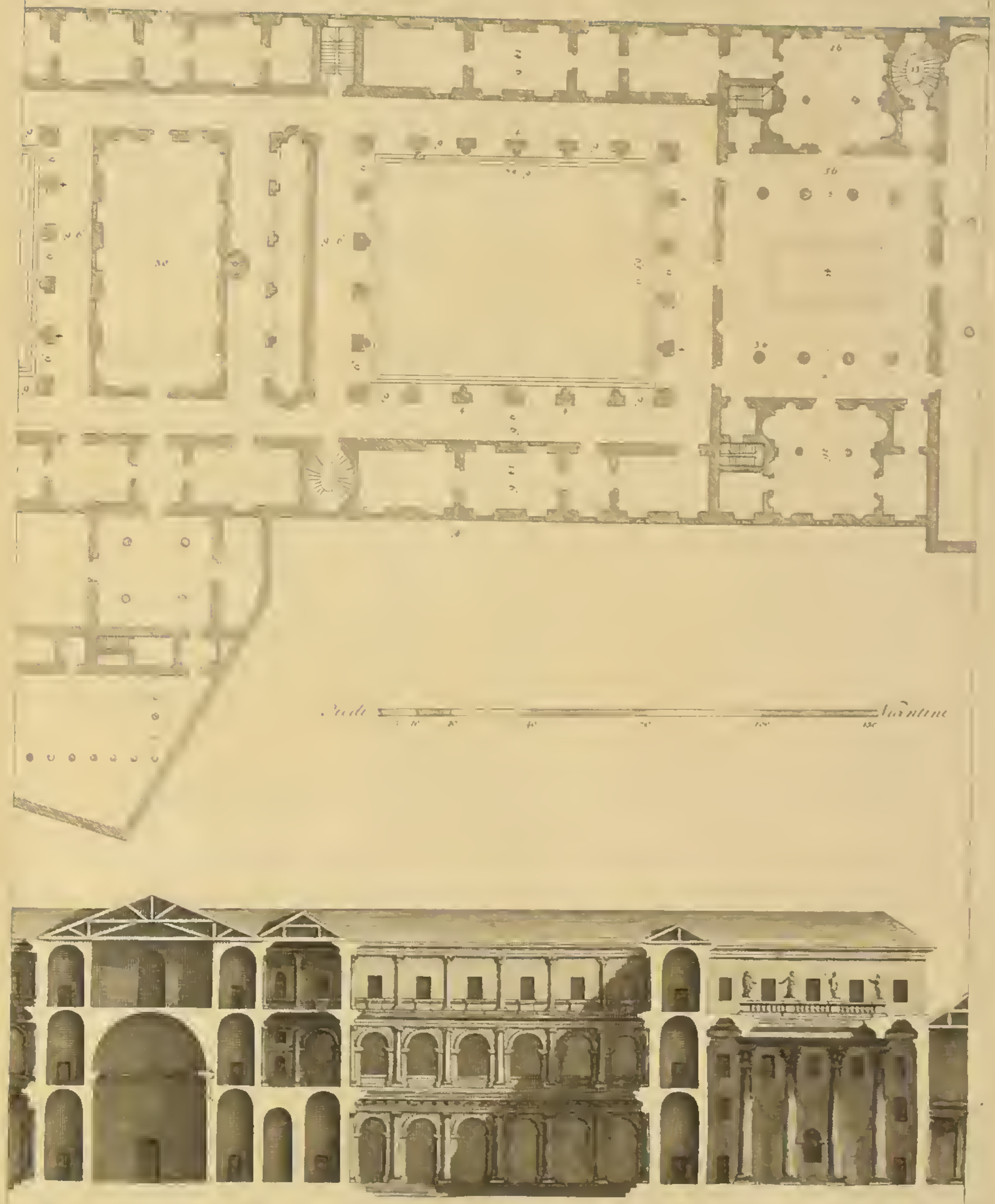
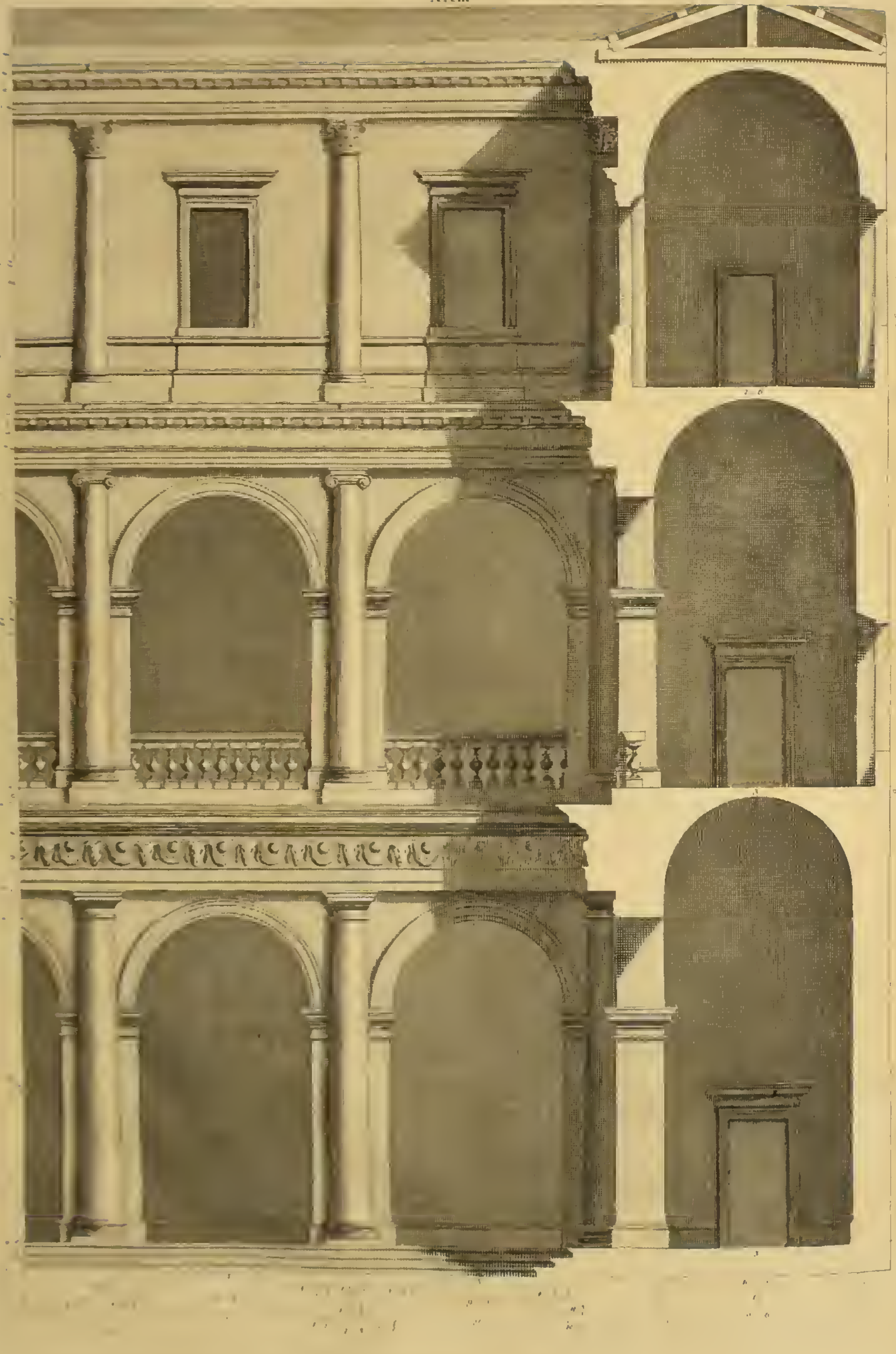
* *Pla.* XXII.

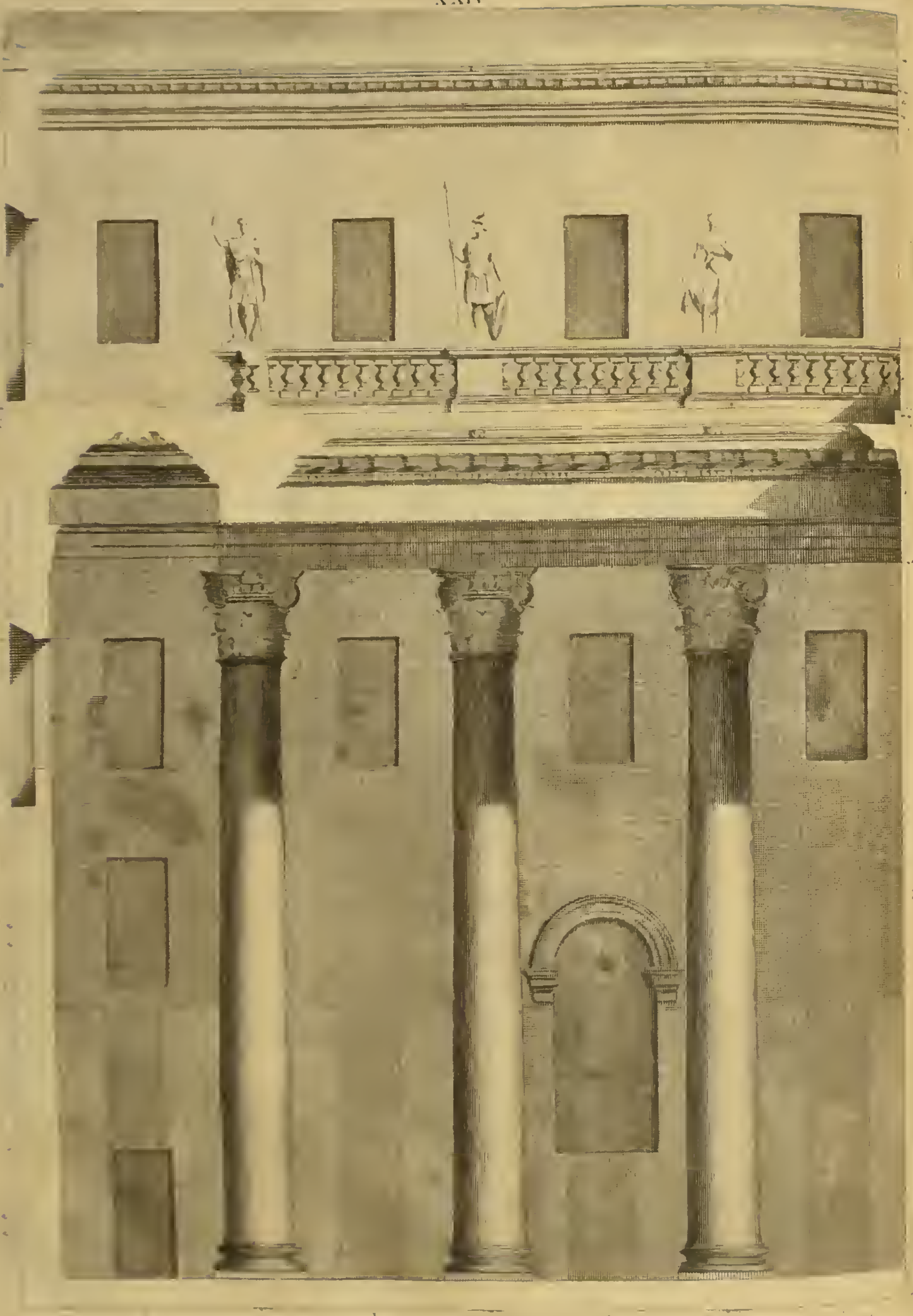
XXII



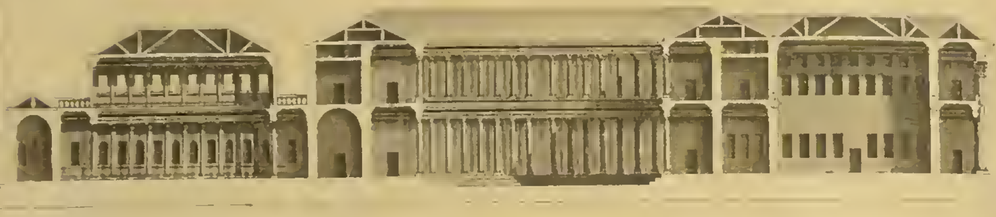
XXIII

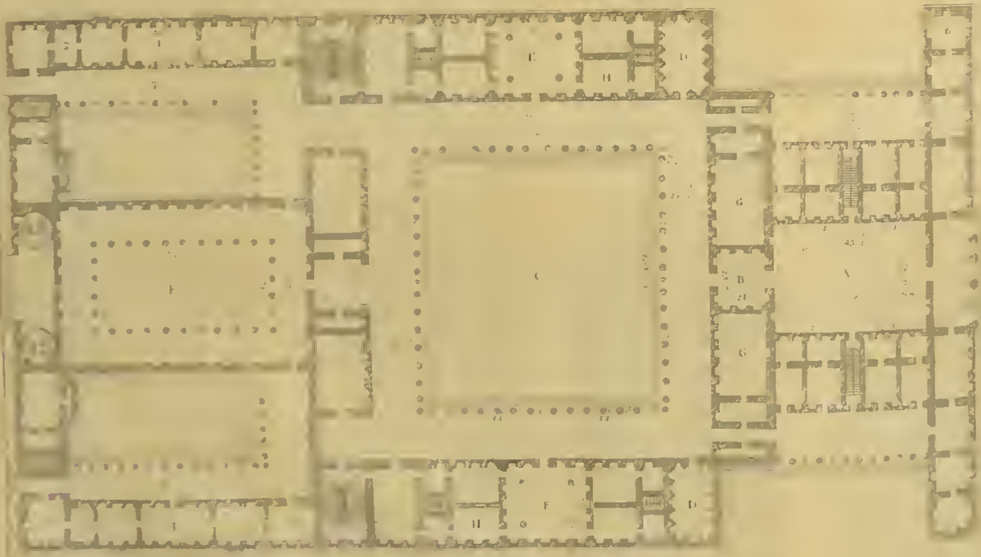


XXIV



XXI





It has a Gallery on each ſide, and under it a Cellar made in the ſhape of a Ciſtern, that no Water may come into it. At one end are the Kitchen, the Ovens, the Poultry-yard, the Wood-houſe, the Landry, and a pretty fine Garden; at the other end are other Conveniencies. This Building has 44 Rooms and 46 Cells, including the apartments for Strangers, and other places for ſeveral uſes.

The firſt * of the following draughts is a part of the Atrium drawn at large, and the ſecond † is a part of the Cloiſter.

CHAP. VII.

Of the Teſtudinated Atrium, *and the private Houſes of the antient* Romans.

BESIDES the various forms of *Atriums* we have ſpoken of before, there was one very much in uſe among the Antients, which they call'd *Teſtudinated* (*that is, after the form of a Tortoiſe*) and becauſe what *Vitruvius* ſays of it is very obſcure and difficult, and conſequently requires a particular Obſervation; I ſhall therefore acquaint you with what I think upon that ſubject, adding alſo the diſpoſition and ſituation of the *OEques*, or great Halls of the *Chanceries*, *Refectories*, Baths, and the like; ſo that the following Cut ** ſhall repreſent all the parts of a private Houſe, every one in its place, according to *Vitruvius*.

The length of the *Atrium* is equal to the diagonal of its ſquare, and has its full breadth in height, which reaches as far as the ſummer, or architrave of the Roof. The Rooms on the ſides are ſix Foot leſs in height; and above the Walls which ſeparate them from the *Atrium*, there are Pilaſters which bear the Roof of the ſaid *Atrium*: between theſe pilaſters there are ſome Apertures or Windows which give light to the ſaid *Atrium*; for the Chambers have an open platform or terraſs above them. The Record-room is oppoſite to the entry, and is two fifths of the breadth of the *Atrium*. This place ſerv'd, as I ſaid before, to put in the Images or Titles of their Anceſtors. A little further one finds the *Periſtylos*, about which are Piazzas as broad as is the height of the columns. The Chambers are of the ſame breadth, and their height, to the impoſt of the Arches, is equal to their breadth; as the Arches have in height the third part of their diameter. *Vitruvius* has deſcrib'd ſeveral ſorts of *OEques*, which wherein alſo the Women did their work. Some of theſe were called *Tetraſtyli*, becauſe they had in them four Pillars. Others were called *Corinthian*, which were ſurrounded with ſemy-columns. The *Egyptian* ones had, over and above the firſt row of columns, a Wall, which incloſ'd them with half-columns plac'd directly above the lower ones, and a fourth part leſs. Between theſe Pillars were the Windows that gave light to the Hall. The height of the Galleries that ſurrounded it, did not exceed the columns of the firſt order; and above all there was a plat-form with a corridor, and an elbow-rail round the whole. I ſhall give a deſign of each of theſe kinds of Halls ſeparately. The ſquare Halls were to take the cool in during the Summer, and had commonly the proſpect of Gardens or other Verdures. They had alſo another kind of Halls that were called *Cizicenes*, and which were alſo deſign'd for the abovesaid uſes. The Chanceries and Libraries were generally on the Eaſt ſide, as alſo the *Triclinia*, or Eating-rooms. There were likewiſe Bagnios for Men and Women, which I have repreſented in the further part of the Houſe.

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* *Plate* XXIII. † *Plate* XXIV. ** *Plate* XXV.

A. Atrium.
B. *Record-room.*
C. Periſtylos.
D. *Halls after the* Corinthian *manner.*
E. *A Hall with four columns.*
F. *A* Baſilica.
G. *Apartments for the Summer.*
H. *Chambers.*
I. *Libraries.*

The following deſign * is for the ſame *Atrium*, from a larger Scale.

A. Atrium.
B. *Record-room.*
C. Piazza *about the inner court.*
D. *The inner court.*
E. *Door way to the Record-room.*
F. *Part of the* Corinthian *Hall.*
G. *Galleries, or Piazzas.*
H. *Piazza before the* Atrium.
I *Chambers about the* Atrium.
K. *Summers making the Freeze of the Entablature within.*
L. *Windows which give light to the* Atrium.
M. *The flat above the Walls of the* Atrium.

CHAP. VIII.

Of the Halls with four Columns.

THE following deſign † is of that ſort of Hall call'd *Tetraſtylos*, becauſe it had four columns. It was made ſquare, and the columns ſerv'd not only to proportion the breadth to the height, but alſo to make the upper place ſtill the firmer; which is

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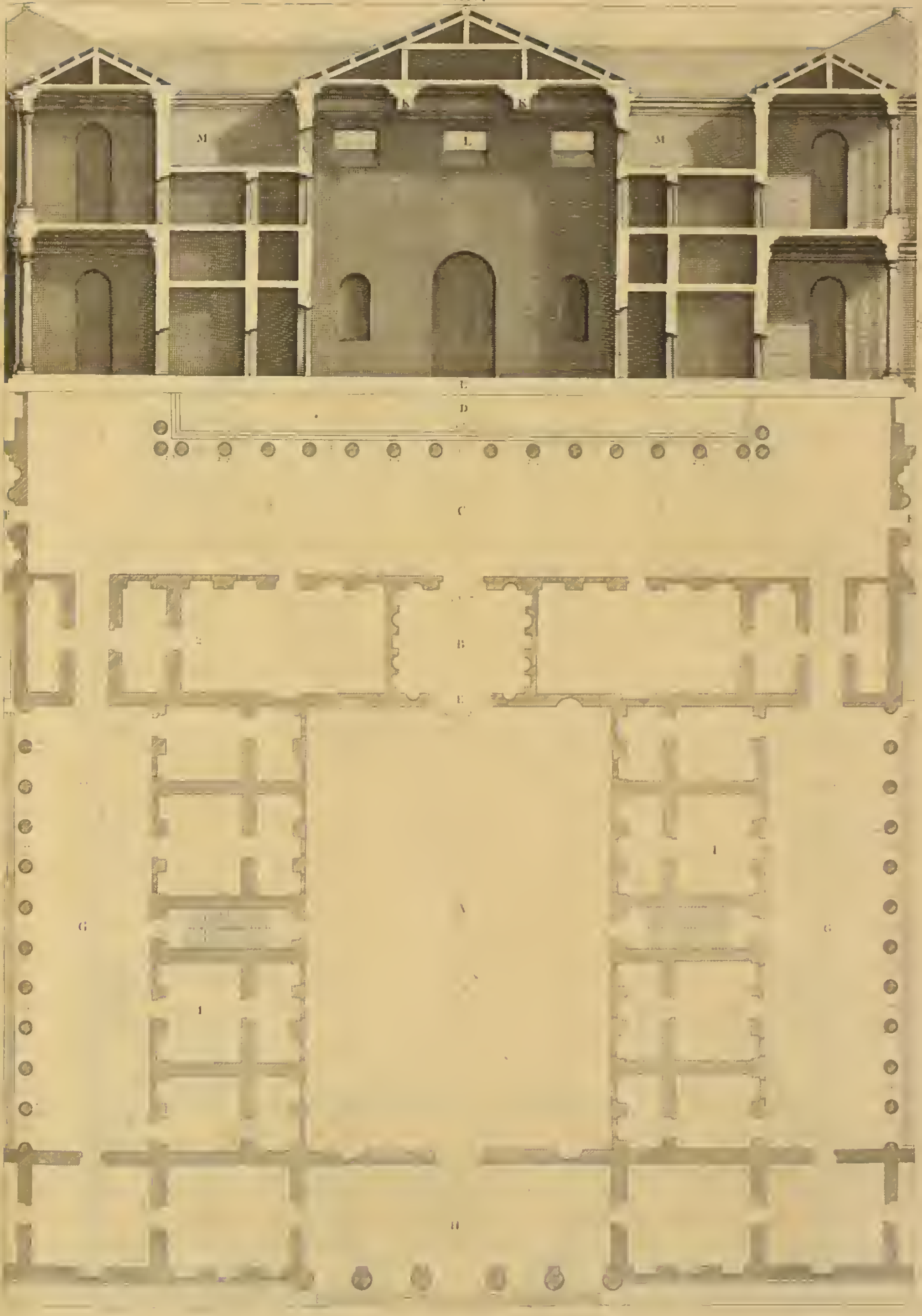
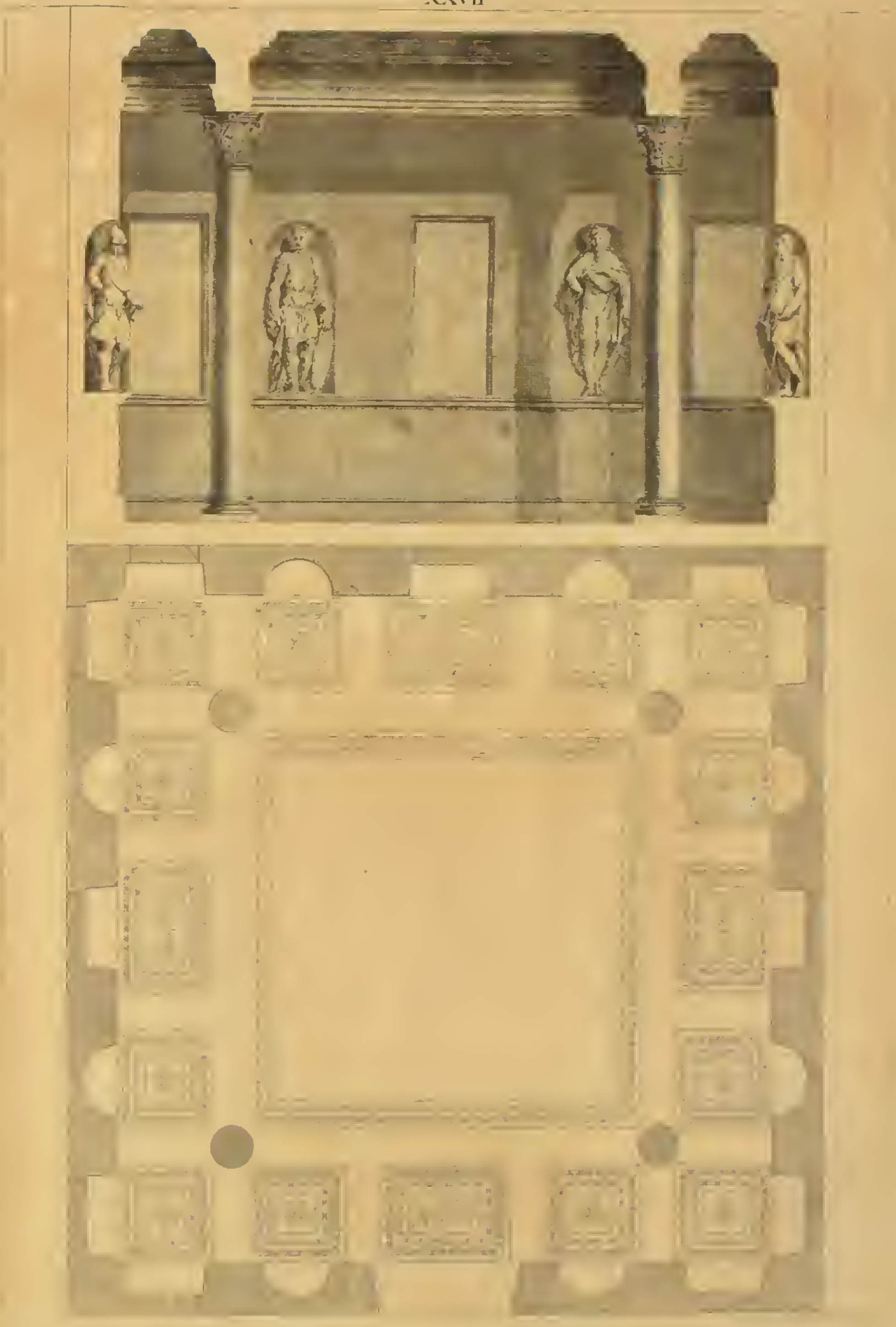
* *Plate* XXVI. † *Plate* XXVII.

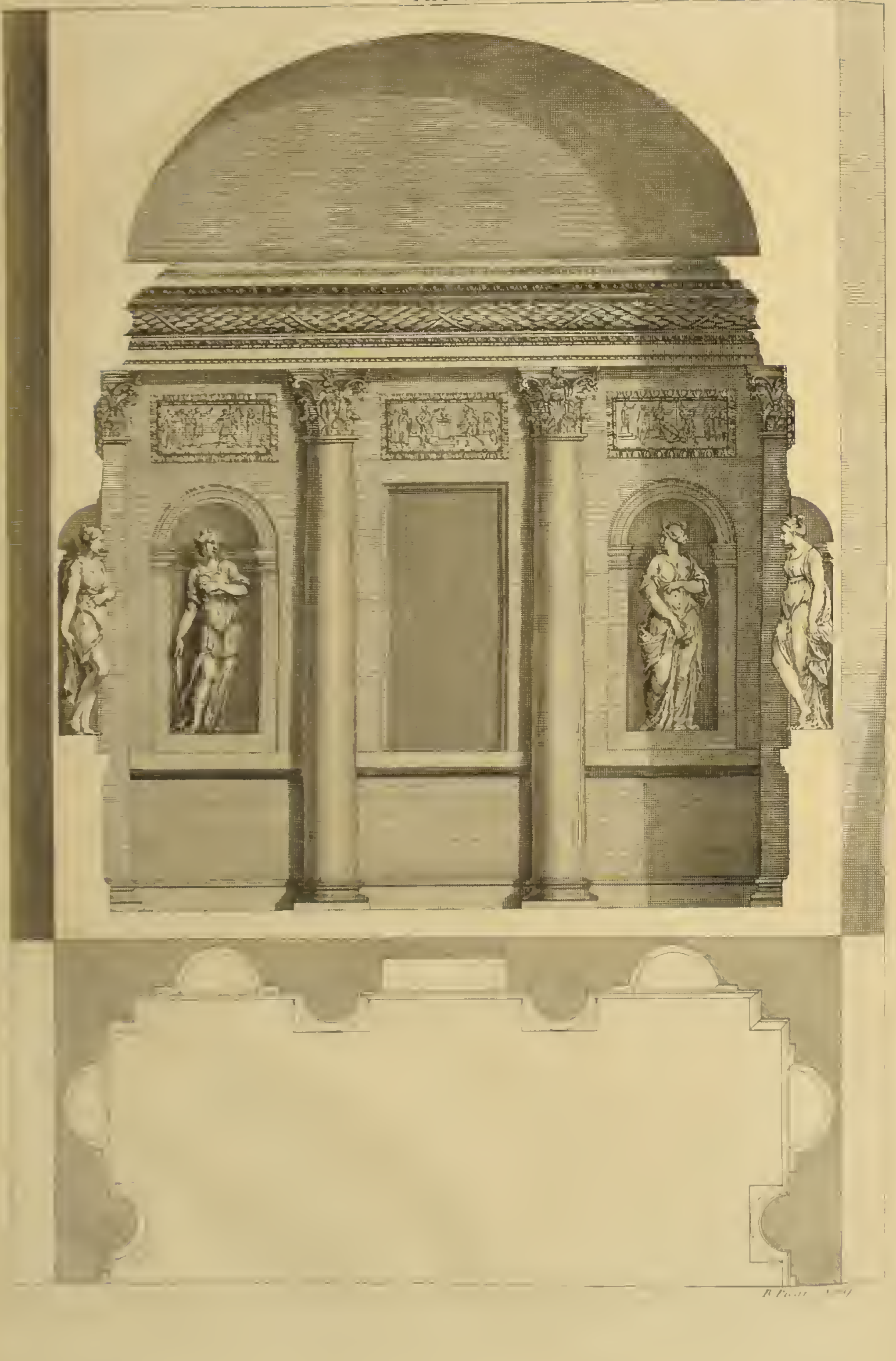
XXVI



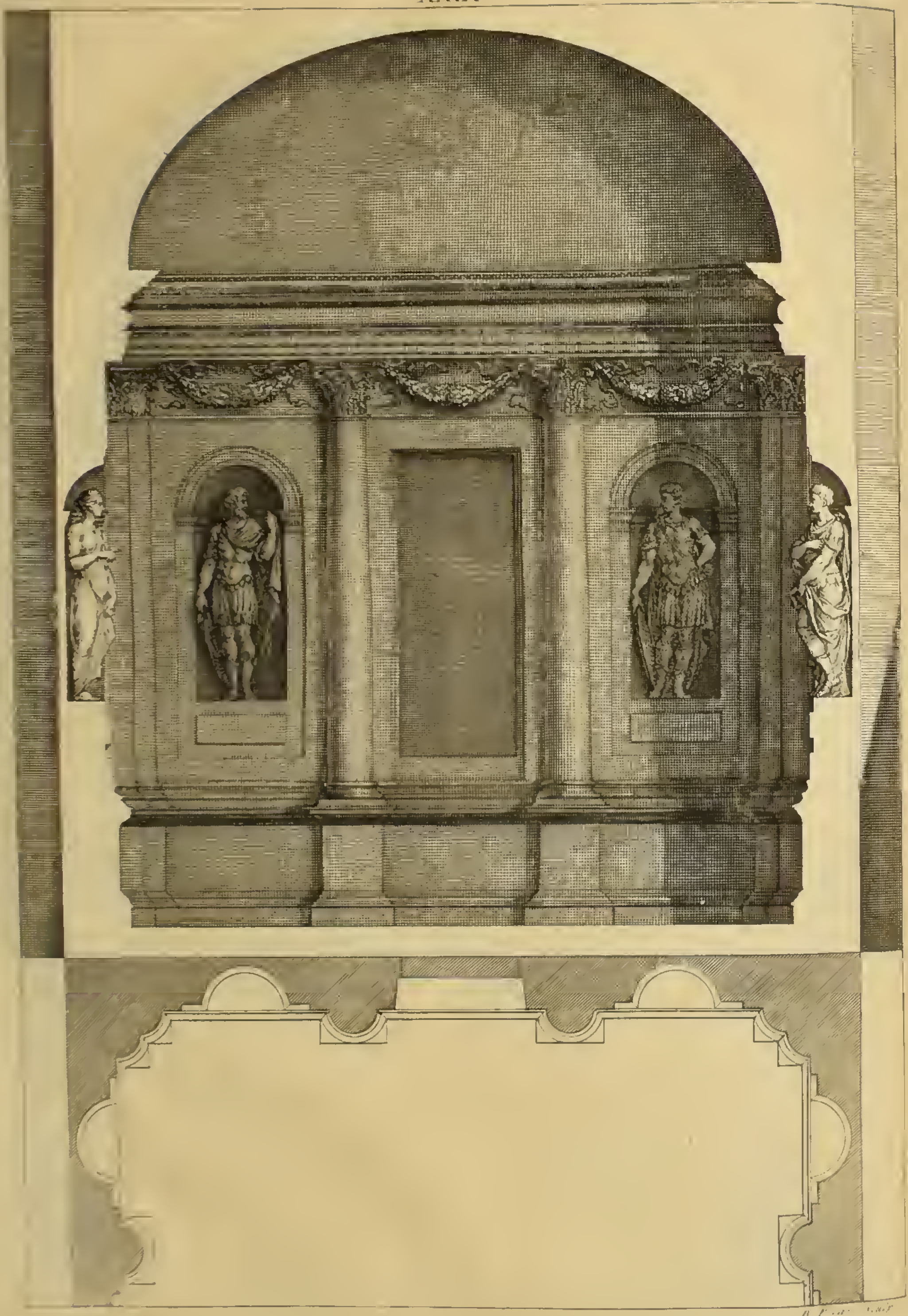
XXVII

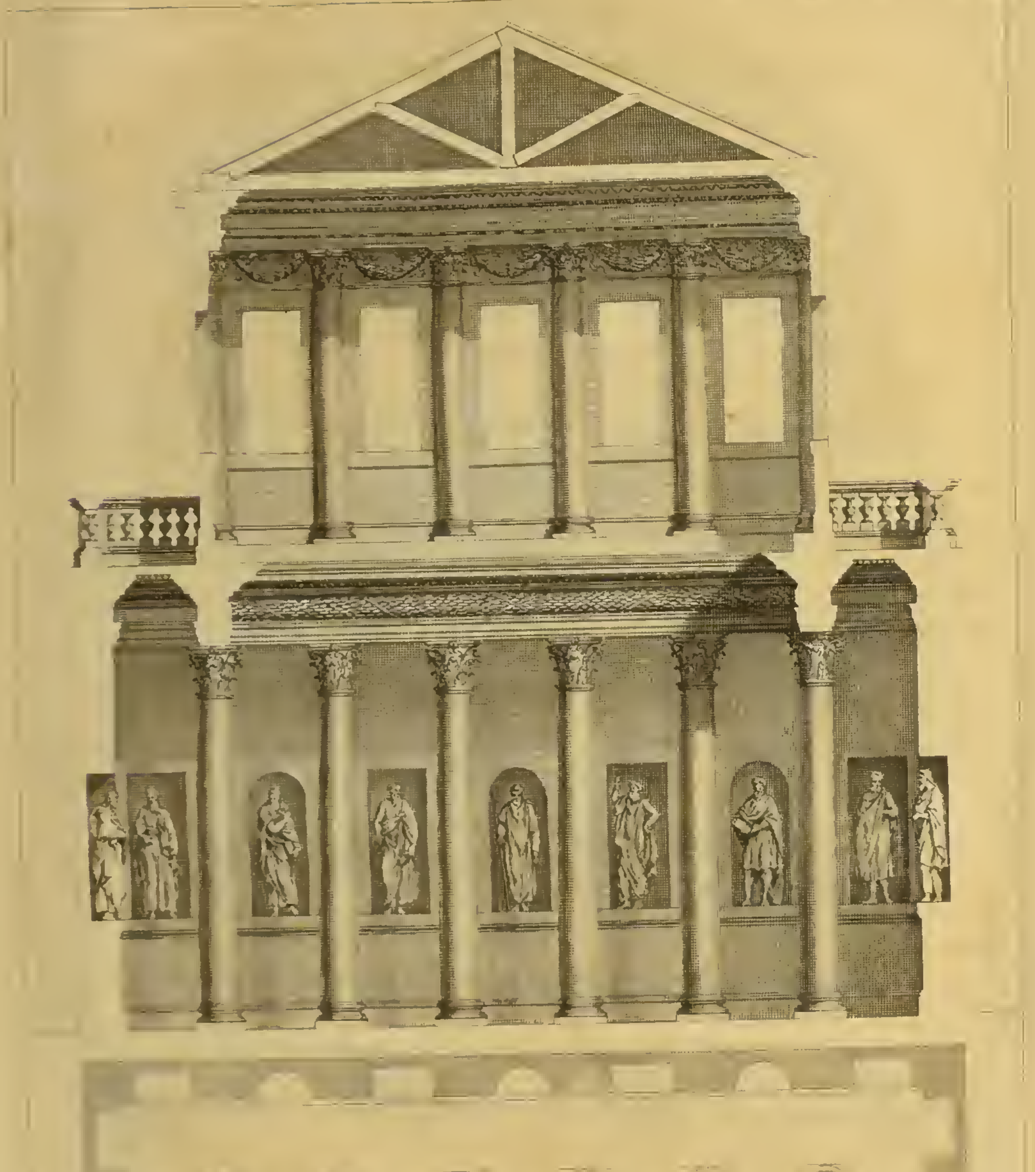


XXVIII



B. [illegible]





is a thing that I have practis'd in moſt of my Buildings, as may be ſeen both in the deſigns I have already given, and in thoſe that are to follow.

CHAP. IX.

Of the Corinthian *Halls.*

THE *Corinthian* Halls were of two ſorts. The firſt had their columns only laid on the Floor, as may be ſeen in the firſt deſign *; and the ſecond were laid on Pedeſtals, as in the ſecond deſign †: But the columns in both were always near the Wall, and the *Architrave*, *Freeze*, and *Cornice* were made with Stuc, or elſe of Wood, and there was but one row of Pillars. The Ceilings were either made ſemi-circular, or ſcheme, that is, ſo flat as to have in height only one third of the breadth of the Room. They were generally advanc'd with compartments made with ſtuc and painting. The length of theſe Halls would be of a fine proportion, if it was of a ſquare and two thirds of their breadth.

CHAP. X.

Of the Hall after the Egyptian *manner.*

THE following deſign ** is for Halls after the *Egyptian* way, which very much reſemble *Baſilicas*, or Courts of Juſtice, (of which I ſhall alſo ſpeak when I treat of publick Buildings) becauſe theſe ſorts of Halls had a Portico wherein the columns were at a diſtance from the Wall, after the ſame manner as in the *Baſilicas*; and upon theſe Pillars were plac'd the *Architrave*, *Freeze*, and *Cornice*. The ſpace between the Pillars and the Wall was cover'd with a platform ſurrounded by a Corridor with rails and balluſters. Above the ſame Pillars, there was a continu'd Wall with half Pillars on the inſide of it, a fourth part leſs than the lower ones. Between the ſaid half Pillars were plac'd the Windows that gave light to the Hall, and through which, when laid open, thoſe that were on the platform could look into it. This ſort of Halls muſt needs have been of an admirable magnificence, as well by reaſon of the ornaments of its Pillars, as for its height; becauſe the

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* *Plate* XXVIII. † *Plate* XXIX. ** *Plate* XXX.

Soffite reach'd above the Cornice of the ſecond Order, and one may judge how commodious they were, for receiving great companies, for banquetting, and for all manner of Recreations.

CHAP. XI.

Of the private Houſes of the Greeks.

THE *Greeks* had a different way of Building from the *Romans*; for, as *Vitruvius* ſays, inſtead of making Portico's, or Galleries and Halls, they made the entry to their Houſes very narrow *, placing on one ſide the Stables, and the Porter's-lodges on the other. From this firſt entry, one paſs'd into a Court, which had *Piazzas* on three ſides, and towards that of the South they made *Anti*, or butments of Pilaſters, which ſupported the joyſts of the Ceiling more inwards: becauſe, that leaving ſome ſpace between the one and the other, they had very large places, which they appointed for Lodgings to the Miſtreſs of the Houſe, and to the Men and Maid Servants. On the ſame Floor with theſe butments, there were ſome Rooms which we may call Anti-chambers, Chambers, and Drawing-rooms, being every one juſt behind the other. About the *Piazzas* were places appointed for eating, ſleeping, and the like Family neceſſities. To this Building was another join'd, greater and better adorn'd, with larger Courts, wherein they made four *Porticos*, or *Piazzas* of equal height, if they did not make one of a larger ſize to the South; and then the Piazza on that ſide was call'd *Rhodian*, perhaps becauſe the *Rhodians* firſt uſed this manner of Building. In theſe Courts were very magnificent Galleries to the Front: they had their own Gates, being inhabited only by Men. On the right and left ſide of this Building they made others, which, as well as the foregoing, had their own particular Gates, with all the conveniencies neceſſary for a dwelling. There they uſed to lodge Strangers; for it was a cuſtom among this Nation, that when they had a foreign Gueſt, they entertain'd him at their own Table the firſt day; but after that time they aſſign'd him an Apartment in this kind of Houſe, wherein they furniſh'd him with every thing neceſſary for his maintenance: ſo that Strangers were thus oblig'd to no Ceremony, and had the ſame liberty as if they had been all the while at their own home. And now I think I have ſufficiently explain'd the antient *Greek* way of Building,

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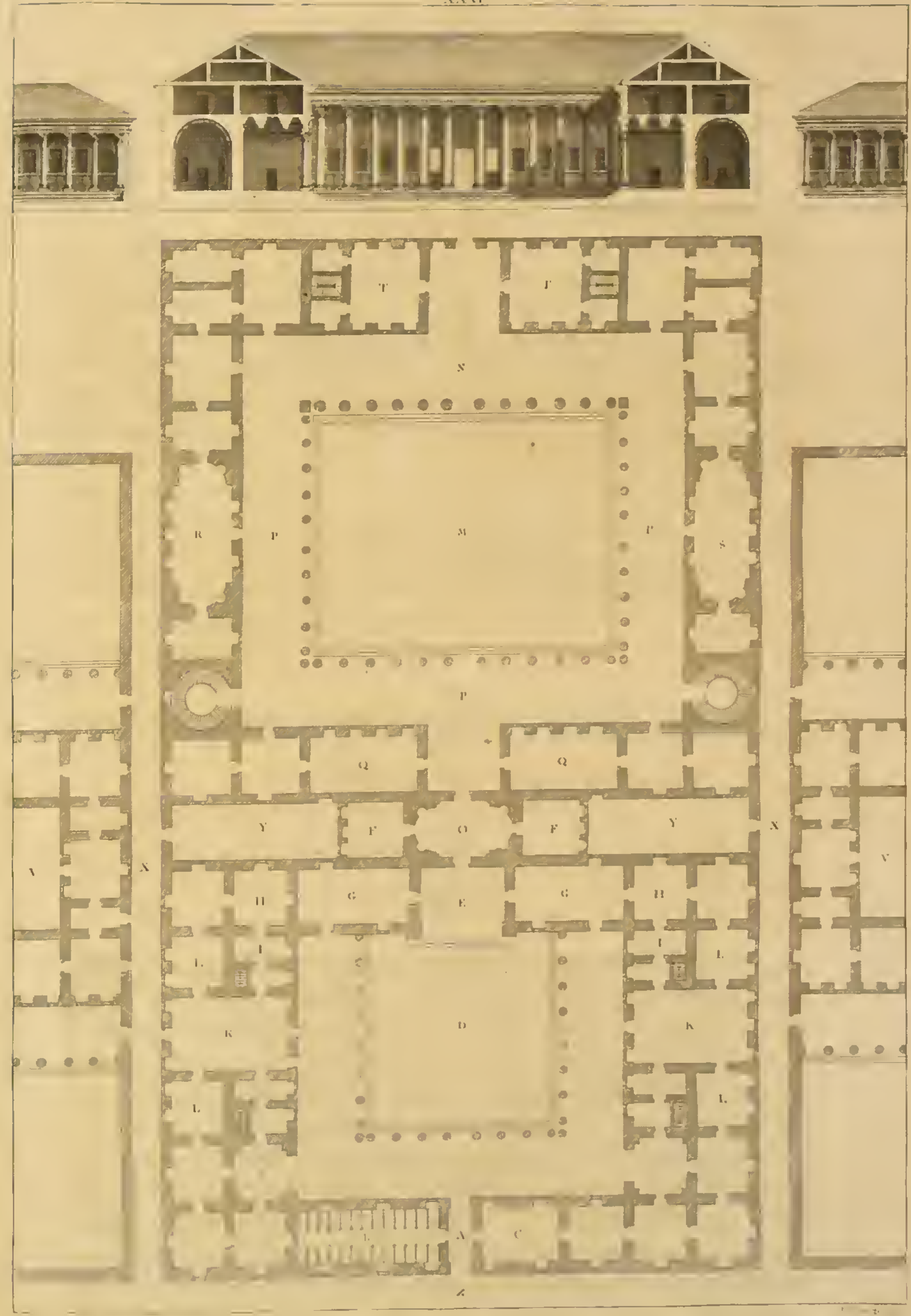
* *Fig.*

XXXI



as well as that we practiſe our ſelves at preſent in the Towns.

Parts of a private Houſe after the *Grecian* manner.

A. *Paſſage at the entry of the houſe.*
B. *Stables.*
C. *Porter's Lodge.*
D. *Firſt Court.*
E. *Lobby, or Veſtibule, thro which people paſt into the rooms.*
F. *Places where the women did their work.*
G. *Firſt great Chamber, which we may call an Anti-chamber.*
H. *A leſſer room.*
I. *A Cloſet.*
K. *Great dining-room.*
L. *Common Chambers.*
M. *Second Court, larger than the firſt.*
N. Piazza *larger than the three others, the Court of which is call'd* Rhodian.
O. *Paſſage leading from the little Court to the greater.*
P. *Three* Piazzas, *the pillars of which are ſmall.*
Q Cizicene *Refectories, and Chanceries, or places that uſed to be painted.*
R. *Hall.*
S. *Library.*
T. *Square Hall where they uſed to eat.*
V. *Apartments for Strangers.*
X. *Small paſſages which divided the ſtrangers apartments from thoſe of the maſter.*
Y. *Small open Courts.*
Z. *The principal ſtreet.*

CHAP. XII.

Of the Situation which ought to be choſen for Country Houſes.

AS certainly 'tis highly creditable and convenient for a Gentleman to have a Houſe in the City, where he is oblig'd ſometimes to reſide, either as occupying ſome publick Poſt in the Government, or for the management of his own private Affairs; ſo perhaps he may receive no leſs pleaſure and advantage from a Houſe in the Country, where he paſſes the reſt of his time in ſeeing and improving his own Poſſeſſions, in augmenting his ſubſtance by induſtry and agriculture; where, by exerciſing himſelf, either in walking, or on Horſe-back (which are only proper for the Country) he preſerves his Body ſtrong and healthy; and where, in a word, the mind being over-labour'd by the fatigues of the City, will be ſingularly recruited and recreated: ſo that he may then quietly apply himſelf to the ſtudy of Books, or the contemplation of Nature, in imitation of thoſe antient Sages, who, on ſuch accounts, uſed frequently to retire to the like places; where being viſited by their viruous Friends and Relations, and poſſeſſing Pleaſure-houſes, Gardens, Fountains, and ſuch other objects of diverſion, but above all their own virtue, they cou'd eaſily attain that higheſt pitch of a happy Life, that on this earth can be poſſibly enjoy'd. Now having already, by the help of God, finiſh'd all I had to ſay with relation to Houſes in the City, 'tis but reaſonable I ſhould paſs next to thoſe in the Country, where private Affairs and Family-buſineſs are chiefly tranſacted. But before we come to give the deſign and draughts of ſuch, it appears very proper to diſcourſe a little about Situation, or the places fit to be choſen for ſuch Buildings; and of the compartment, or diſtribution of the parts of the ſame: becauſe not being commonly (as in Towns) ſtraiten'd for room by publick Buildings, nor confin'd by our Neighbours to certain determinate bounds, it is the duty of an able Architect to find out with all care and diligence the moſt commodious and healthy places; ſince People live in the Country for the greateſt part of the Summer, during which ſeaſon, our Bodies, even in the healthieſt region, are apt to grow weak and ſickly, by reaſon of the heats. In the firſt place therefore, let the ſeat pitch'd upon be, as near as poſſible, the moſt convenient for the owner's Eſtate, that is, towards the center of the ſame; to the end that without much fatigue, he may himſelf view the whole at any time, tnd make improvements all around; as likewiſe that the Tenants and Labourers may the more eaſily bring the growth of it to his Houſe. If the Building can be erected near a River, it will much conduce to its Beauty and Convenience; becauſe thus not only the products of the Land can at all times be the more eaſily carry'd by Water to the City, and that the Water itſelf will ſerve the uſes of the Houſe and Cattle; but it will render the proſpect moſt agreeable, notably refreſh the Air in Summer, and with no ſmall advantage, as well as ornament, water the Fields, Gardens, and Stalls, which are the very ſoul and ſupport of a Country *Villa.* But if the ſituation can't be near a navigable River, let it be however near ſome Brook, or other running Water, and as far as may be from dead or ſtagnant Waters; becauſe theſe generate the very worſt of Air, which may be eaſily avoided, by building in elevated and agreeable places: I mean where the Air, being free, is in a continual motion, and the Earth, by reaſon of its declivity, purg'd from all humid and noxious Vapours; where the Inhabitants are healthy, chearful, and very well complexion'd; and where one is not diſturb'd with the noiſe of Gnats, and other troubleſome little Animals, which breed in putrefy'd and marſhy Waters. Yet ſince Water is abſolutely neceſſary to the life of Man, and that Waters of different qualities produce in us different Effects (whence ſome beget the Spleen, ſome the Gout, others the Stone, and others other Diſtempers) ſo the utmoſt care is to be taken, that the Houſe may be near ſuch Water as has no odd or ill taſte, and that has no particular Tincture: but, on the contrary, that it be limpid, clear, light, and ſuch as, ſprinkled, will not ſtain white Linnen, all theſe being ſigns of its goodneſs. *Vitruvius* has taught us many ways of trying the goodneſs of the Water; and that Water is held perfect in its kind, which makes good Bread, wherein greens are quickly boil'd, and which leaves no ſediment in the bottom of the Veſſel. It is an excellent mark of the goodneſs of Water, if in its paſſage there neither grow moſs nor ruſhes; but that its bed be clean and fine, with ſand or gravel at the bottom, and without mud or ſlime. The very animals that drink ordinarily of ſuch Waters will give marks of their goodneſs, if they are hearty, brisk, ſtrong, and in good caſe, being neither lean nor feeble. As for the ſalubrity of the Air, an indication of it, over and above thoſe already mention'd, may be taken from old Edifices, if they are neither corrupted nor conſumed; from the Trees, if they be thriving, beautiful, ſtrait, and none of thoſe that naturally grow in fenny places; from the Rocks and Stones of the place, if they ſhow no ſigns of rottenneſs in the part that's above the ſurface of the Earth; and even from the complexion of the Inhabitants, if it be natural, and ſhows a good Conſtitution. None ought to build in Vallies enclos'd by Mountains: becauſe Houſes hid in ſuch places, beſides their being depriv'd of diſtant Proſpects, and that they are not conſpicuous to others, which loſes all their Beauty and Reputation; they are moreover in every reſpect injurious to health, becauſe the Earth, being impregnated with the Rains that ſettle there, ſends forth Vapours peſtiferous, not only to the Bodies, but alſo to the minds of Men; the ſpirits being by their means debilitated, the joints emaſculated, the Nerves relax'd, and the Proviſions carry'd into Magazines and Graineries corrupted with moiſture. If, on the other hand, the Sun can penetrate into thoſe bottoms, the reflection of its Rays will cauſe exceſſive heats; or if it enters not, then a perpetual ſhade will render the People ſtupid, and ſpoil their Complexion.

on. When the winds blow into them they are too impetuous, by reaſon of the narrow chops thro which they muſt paſs; and when they blow not there, the air ſtagnating of courſe, will become groſs and ſickly. The reſolution being taken therefore to build upon an eminence, let a ſituation be choſen that faces the temperate region of the Air, and that is neither always overſhadow'd by higher Hills, nor ſcorch'd up, as it were, with two Suns, by the reflection of the true one from ſome neighbouring Rock: for in either of theſe caſes, it becomes an inconvenient habitation. Finally, in chuſing a ſituation for the building of a *Villa*, or Country-houſe, all thoſe conſiderations are requiſite, which are uſed in chuſing the ſituation of a City-houſe: for as the City is but one great Houſe, or Family; ſo every Family, or private Houſe, is a little City.

CHAP. XIII.

Of the Compartments of Country-houſes.

AFTER having found and pitcht upon an airy, pleaſant, advantageous, and healthy Situation, one muſt think next on the Compartment of the Building, or the diſtribution of its parts, and to make it both elegant and convenient. Two ſorts of Houſes are neceſſary in the Country: one for the dwelling of the Maſter and of his Family; the other for the Farmer, who improves the Land and gathers the Rents, as well as for lodging the Cattle and the fruits of the Earth. Therefore it will be requiſite to diſpoſe the ſituation of both the Buildings in ſuch a manner, that the one may be no impediment to the other The Maſter's Houſe muſt be made ſuitable to his Quality, and proportion'd to the number of his Retinue, after the ſame manner as the City-houſes, whereof we have treated before. There muſt be proper covers made for every thing belonging to the *Villa*, in proportion to the product of the ground and number of the Cattle, and contiguous to the main Houſe, that the Maſter may eaſily go every where ſhelter'd, without being hinder'd from minding his buſineſs by either Snow, or Rain, or the ſcorching heat of the Sun. This will ſerve alſo to ſhelter the Wood, and other numberleſs Country Proviſions, which too much moiſture of the Air, or the heat will ſpoil; beſides, that ſuch *Piazzas* will make the Building look much greater. Regard muſt alſo be

Proviſions, with all the Country tools and luggage conveniently, and allow them room enough. The Chambers of the Steward, of the Farmer, and of the Labourers, muſt be in a place convenient for them, and near the Gates for the ſecurity of the other places. The Stalls and Stables for labouring Cattle, ſuch as Oxen and Horſes, muſt be far from the principal Houſe, becauſe of the ill ſmell of their dung; but they ought to be in a warm and airy ſituation. All breeding Creatures, ſuch as Hogs, Sheep, Pigeons, Fowls, and the like, require each a place proper to their kind; and in this matter one muſt be ruled by the different cuſtoms of Countries. The Cellars muſt be under ground, very cloſe, and in a dry place, far from all noiſe, moiſture, or any ill ſmell. They ought to receive their light from the Eaſt to the North: becauſe that the Sun ſhining from the other ſides, would be apt to heat, debilitate, and ſpoil the Wine or other Liquors. One muſt give them a little declivity in the middle, upon a cement Pavement, or elſe with ſquare Stones ſo well join'd together, that ſhould the Wine happen to ſpill, one may take it up again. The tubs wherein the Wine is working, muſt be under covert near the Cellars; and be raiſed ſo, that the props may be a little higher than the bung-hole of the Pipes, to the end the Wine may be eaſily carry'd thro Channels made of Leather or of Wood into the ſaid Pipes.

The Granaries muſt have their light from the North, becauſe that on this ſide they won't be expos'd to the heats, but rather refreſh'd by the Wind; and the Corn will be much better preſerv'd, without being infeſted by the Mice, and ſuch other Vermin as do it a great deal of hurt. One muſt floor the Granaries with excellent Earth; but when ſuch is not to be had, Deals muſt be uſed, becauſe Lime is a great Enemy to Corn.

The other Store-houſes, on the very ſame account, muſt have their lights to the ſame ſide. The Hay-lofts may be to the South or Weſt; becauſe when the Hay is thus well dry'd by the Sun, there will be no danger it ſhould corrupt and take fire. The tools and implements belonging to Tillage, are beſt under coverts turn'd to the South. The Barns where the Corn is threſhed muſt be expos'd to the Sun, ſpacious, large, upon a firm ground, and a little rais'd in the middle; as round about it, or at leaſt on one of its ſides, there ought to be a *Piazza*, that in caſe of a ſudden Rain, one may immediately ſecure the Corn. 'Tis not proper it ſhould be too near the Maſter's Houſe, becauſe of its duſt; but it ought not to be ſo far from it, but that it may be within his view.

This in general is ſufficient concerning the choice that is to be made of the Situation and Compartment of Country-houſes: now, to acquit my ſelf of my promiſe, I ſhall give here the draughts of ſome Houſes, which, according to ſeveral Inventions, I have built in the Country.

CHAP. XIV.

The Draughts of ſeveral Country-houſes built by noble Venetians.

THE following Houſe * is at *Bagnolo*, within two miles of *Lonigo*, a Caſtle in the *Vicentin*, belonging to the three Brothers, the magnificent Counts *Victor*, *Marco*, and *Daniel Piſani*. On both ſides of the Court are the Stables, Cellars, Granaries, and ſuch other places for the ſervice of the *Villa*. The Columns of the Porticos are of the *Dorick* Order. The Lord's Apartment is in the middle of the Building. The Floor of the firſt Chamber is rais'd ſeven foot above the level of the Ground, under which is the Kitchen, and other places belonging to the Servants. The Hall is arch'd, its height being equal to its breadth, and one half more. The Arches of the Galleries have likewiſe the ſame proportion. The Chambers are ceil'd, and as high as broad; the greateſt are a ſquare and two thirds long; the others are but a ſquare and a half. There was not ſo great regard had in placing the two back-ſtairs, where they might receive a clearer light (as we have order'd in the firſt Book) becauſe theſe Stairs ſerving only for the Offices underneath, or for the Granaries and other like places above, the chief care was to compleat the middle Apartment where the Maſter lodges, as well as Strangers; and the Stairs leading to this Story are very advantageouſly plac'd, as may be ſeen in the draught. Let this ſerve for a general advertiſement to the prudent Reader, with reſpect to all the other Houſes which have but one Story; becauſe in ſuch as have two fine ones, and well adorn'd, I have taken care to order it ſo, that the Stair-caſes are very lightſome, and in convenient places: I ſay two Stories, be-

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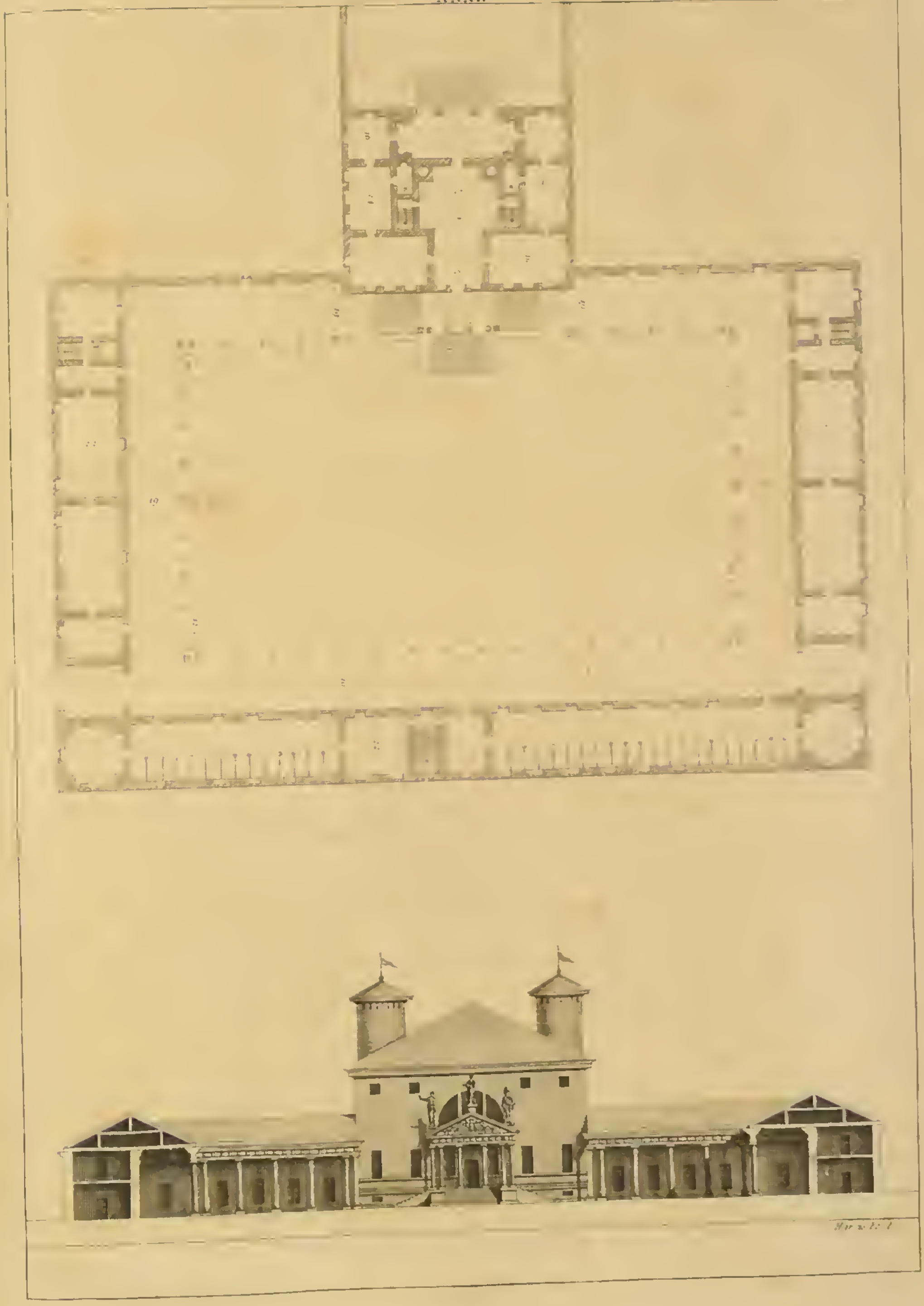
* *Plate* XXXII.

XXXII



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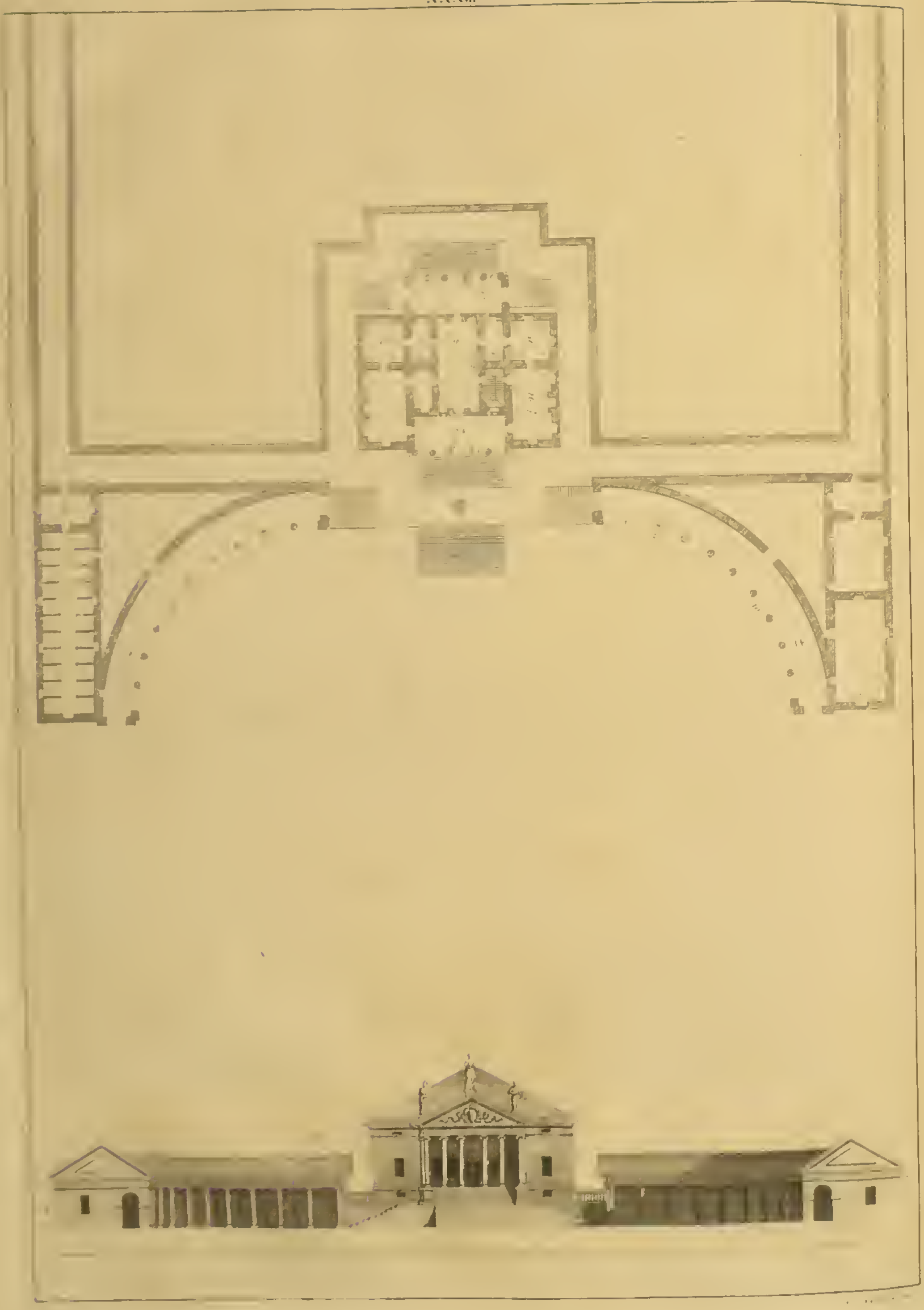
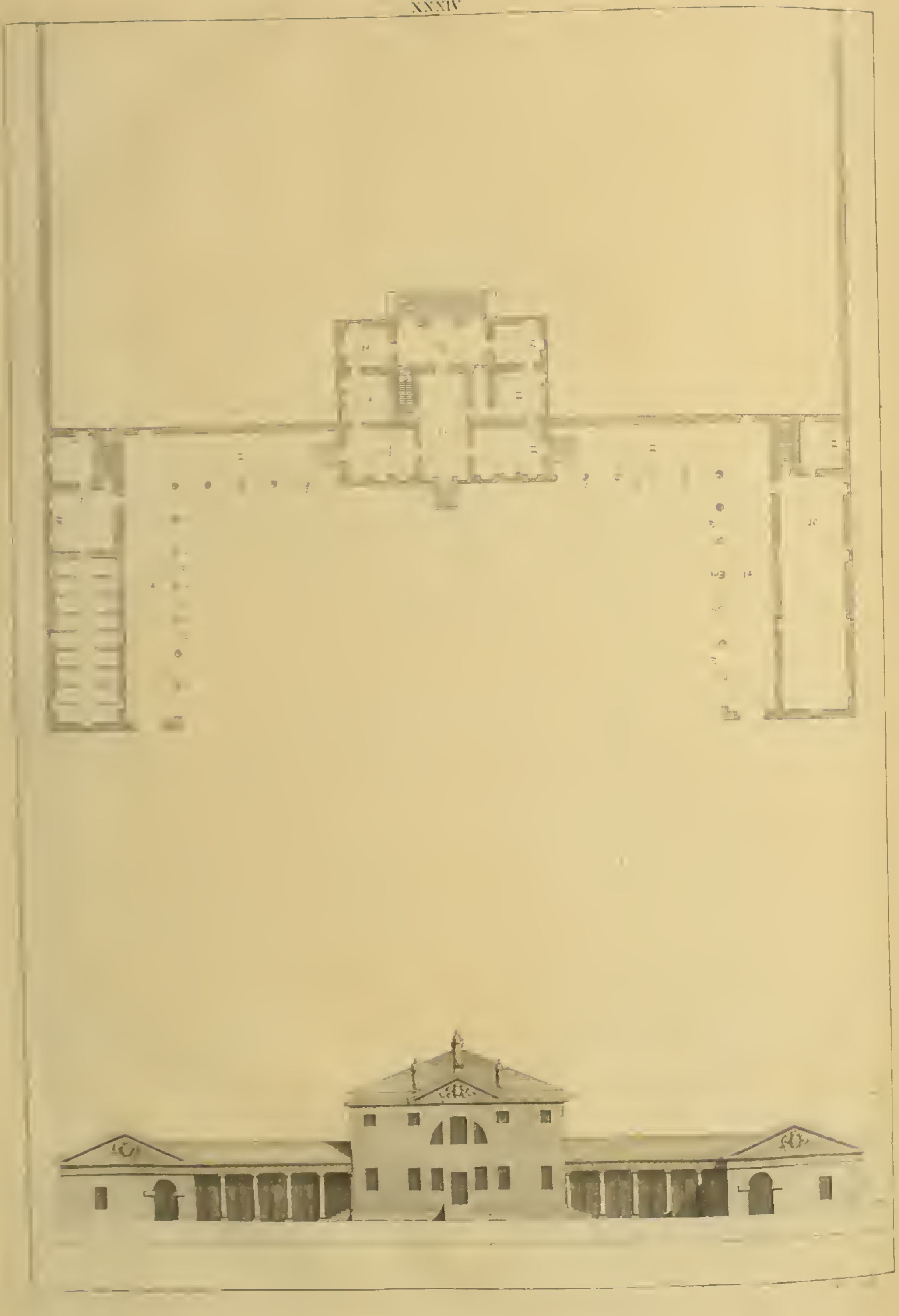
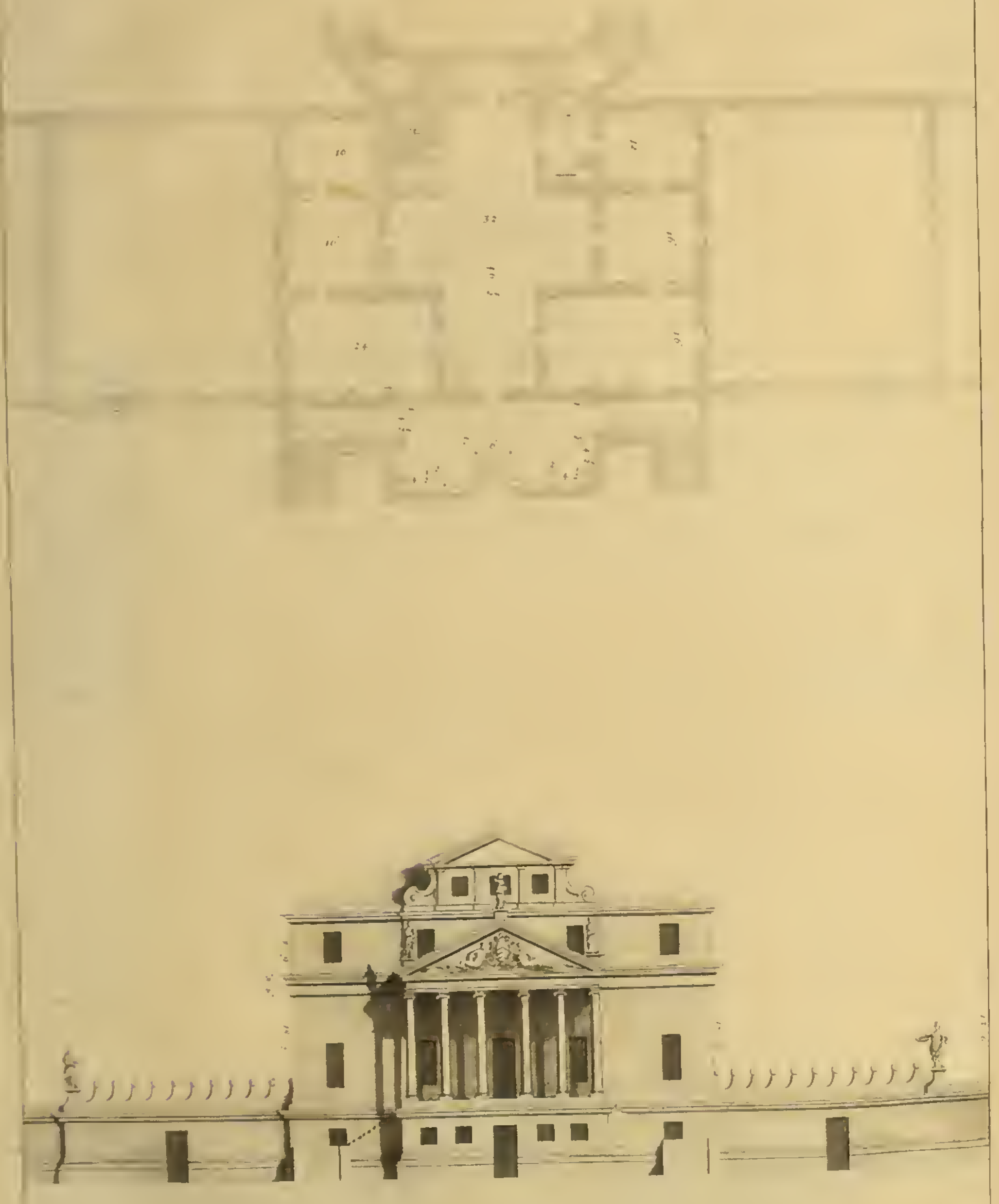


XXXIV



XXXV



cauſe neither what is under ground for Cellars and ſuch uſes, nor what is above for Granaries and Garrets, is reckon'd among the principal Stories, as not ſerving to lodge Gentlemen.

The Houſe following [*] belongs to the magnificent Lord *Franciſco Badoero* in the *Poleſine*, in a place call'd *la Frata*. 'Tis ſituated upon an aſcent, at the foot of which paſſes a branch of the *Adige*, where a Caſtle of *Salinguera de Eſte*, Brother-in-law to *Ezzelino Romano*, antiently ſtood. All this Building has a Pedeſtal five foot high for its Baſis, at the level of which is the floor of the Chambers, which are all of them ceil'd and painted in *groteſque* of a very fine Invention, by *Giallo Florentino*. The Granaries are above; and the Kitchen, with the Cellars and other conveniencies, are below. The Columns of the Galleries in the body of the Houſe are *Ionick*. The Cornice goes about the whole Houſe like a Crown. The pediment over the Portico makes a very fine ſhew, raiſing the middle of the Houſe higher than the wings. Afterwards, as one goes downwards, there are the Farmer's and Steward's Habitations, the Stables, and ſuch other places fit for a Country-houſe.

The magnificent Lord *Marco Zeno* has put the following invention [†] in practiſe at *Caſalto*, which is a place near the Caſtle of *la Motta*, in the *Trivigian*. It ſtands upon a baſement, that ſurrounds the whole Building, equal with the floor of the Rooms, which are all arch'd. The height of the largeſt is according to our ſecond manner. The Arches of the ſquare Rooms are grinded in the angles about the Windows: Thoſe of the Cloſets, or Rooms near the Galleries, are *faſciated*, as are thoſe of the Hall. The Hall and Galleries are arch'd of an equal height, and are likewiſe both of them higher than the Rooms. This Houſe has Gardens, a Court-yard, a Dove-houſe, and every thing that is neceſſary for a Country dwelling.

Near to *Gambarare*, on the *Brenta*, is the following Building [**], which is the Houſe of the magnificent Lords *Nicolo* and *Luigi de Foſcari*. The Houſe is raiſed eleven foot from the level of the ground, and below are the Kitchens, Pantries, and the like places. Every thing is arch'd as well above as below. The Arches of the great Chambers are made after our firſt manner Thoſe of the ſquares are arch'd round like a Cupola. On the Cloſets are *Mezanini*. The Hall is arch'd half round grinded: its impoſt is as high from the Floor as the breadth of the Hall, which is excellently painted by Meſſer *Battiſta Venetiano*. Meſſer *Battiſta*

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[*] *Plate* XXXIII. [†] *Plate* XXXIV. [**] *Plate* XXXV.

Franco, one of the beſt draughtſmen of our time, did alſo begin to paint one of the great Chambers, but he dy'd before he could finiſh his Work. The Portico is of the *Ionick* Order. The Cornice goes round the whole Houſe, and makes a pediment above the Portico, as well as on the oppoſite part. Under the Eves of the Roof there is a ſecond Cornice, which paſſes above the pediments. The upper Rooms are like *Mezanines*, becauſe of the little height they have, which is but eight Foot.

At *Maſera*, near the Caſtle of *Aſolo*, in the *Trivigian*, is the following * Houſe, which belongs to the moſt Reverend *Daniel Barbaro*, Patriarch elect of *Aquileia*, and to the Lord *Marco Antonio Barbaro*, his Brother. That ſide of the Building which advances a little outwards, has two ſtories of Rooms. The floor of the higher ones is level with a Court that is behind, where there is a Fountain wrought in the Mount directly over-againſt the front of the Houſe, with an infinite number of Ornaments, both of Stuc and Painting. This Fountain forms a little Lake, which ſerves for a Pond; from whence the Water over-flowing, goes into the Kitchen, and runs afterwards thro the Gardens, which are on the right and left of the high Road which leads gradually to the Houſe: there it makes two little Ponds, which ſerve alſo for watering-places on the high-way, and running ſtill further, it waters the Orchard, which is very large, and fill'd with excellent Fruit-trees, and all ſort of pulſe.

The front of the Maſter's Apartment has four Columns of the *Ionick* Order. The capitels of theſe on the angles, face, or ſhow alike on both ſides. I ſhall teach the manner of making theſe capitels in the book of Temples. There are Galleries on both ſides of the Houſe, at the end of which are two Pigeon-houſes; and below them are the preſſes for the Vintage (*at the place mark'd* A *in the plan*) with the Stable, and other neceſſary places for Husbandry.

The following Houſe † is near the gate of *Montagnana*, a Caſtle in the Territory of *Padua*, and was built by the Lord *Franciſco Piſano*, after whoſe paſſage into a better Life there remain'd part of it unfiniſh'd. The great Chambers are a ſquare and three quarters long; the Arches are ſchem'd, and according to our ſecond manner. The ſecond ſize Rooms are ſquare, and their Arches round or oven-wiſe. The Cloſets, and the Paſſage between, are of the ſame breadth: their Arches are two ſquares high. The Entry has four Columns, a fifth leſs than thoſe which are without; and they ſupport the floor of the Hall: beſides

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* *Plate* XXXVI. † *Plate* XXXVII.

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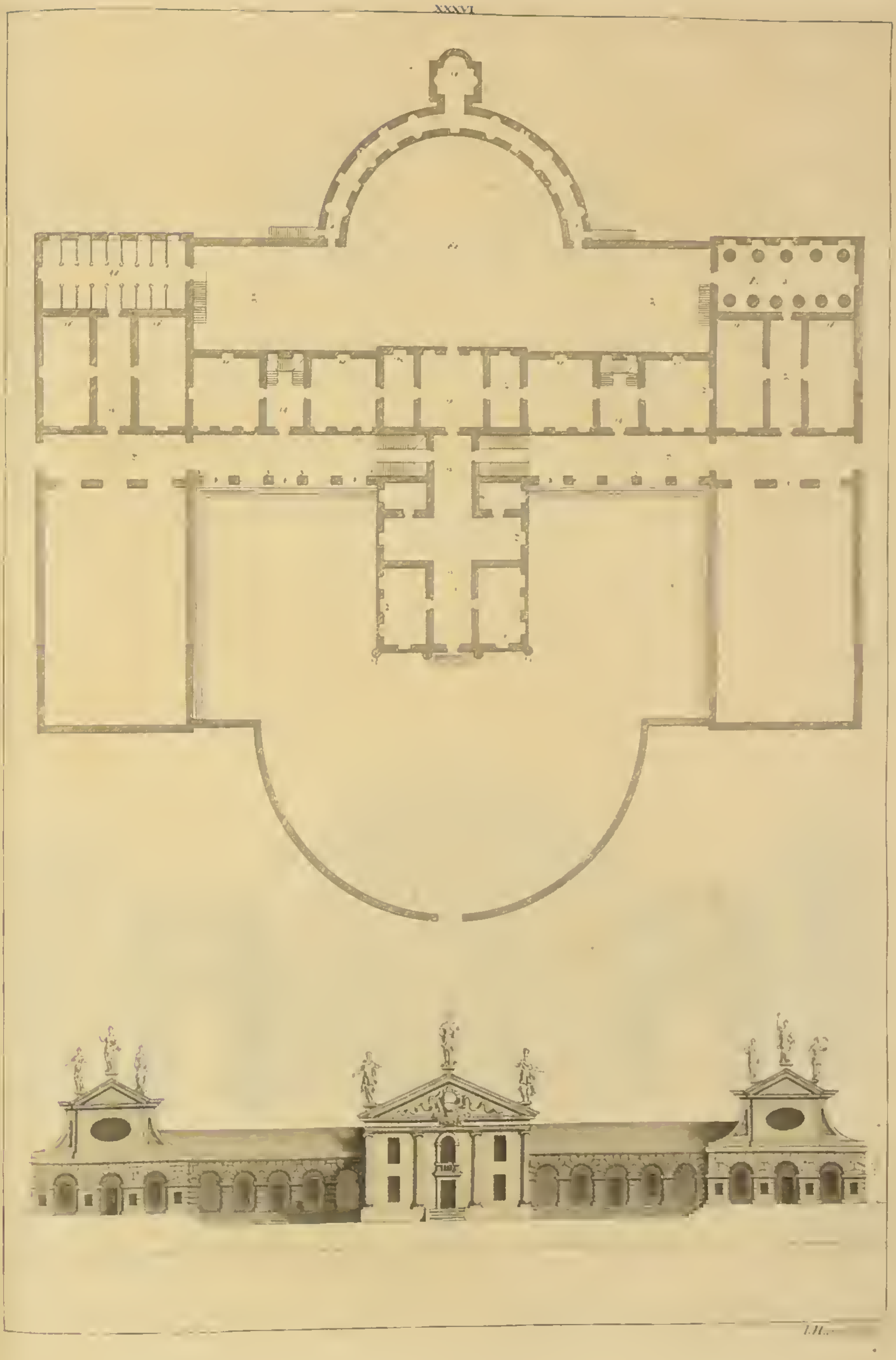
XXXVI



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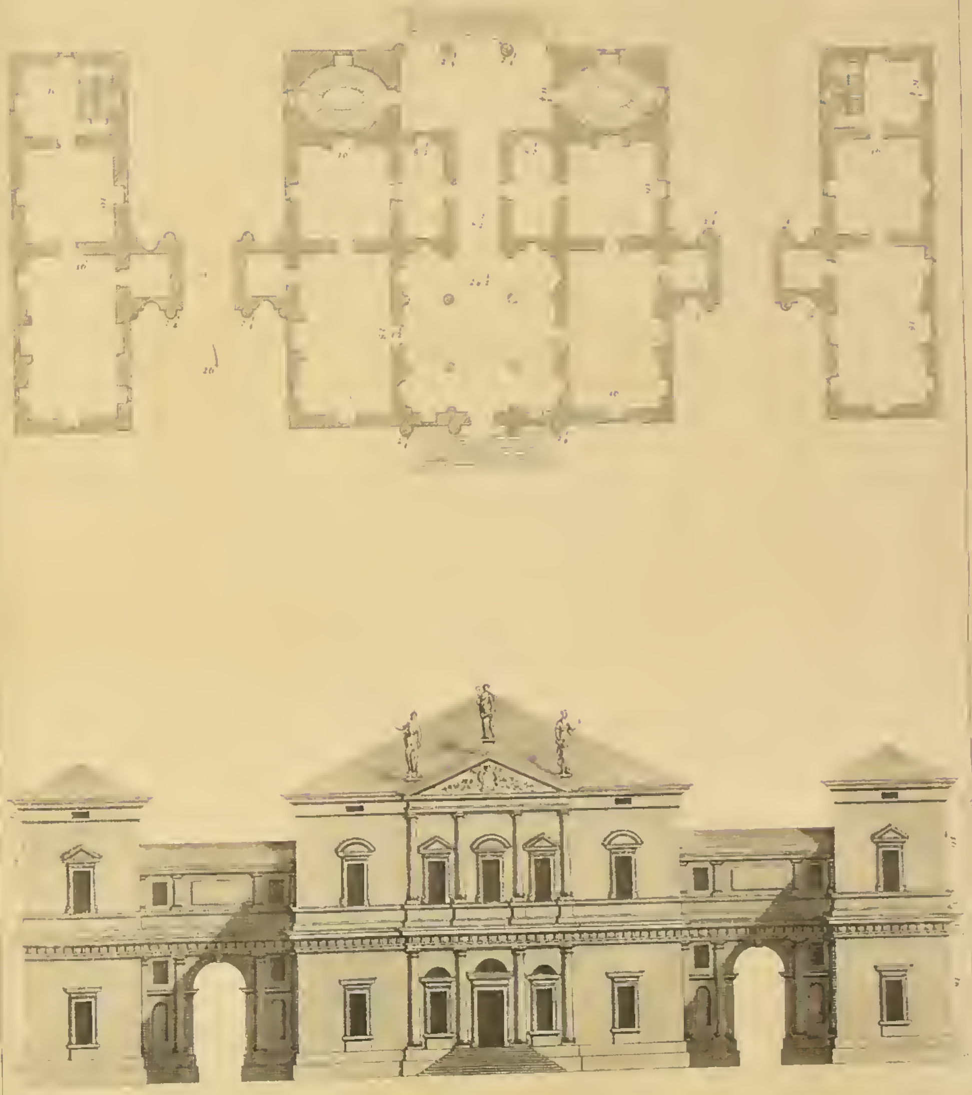
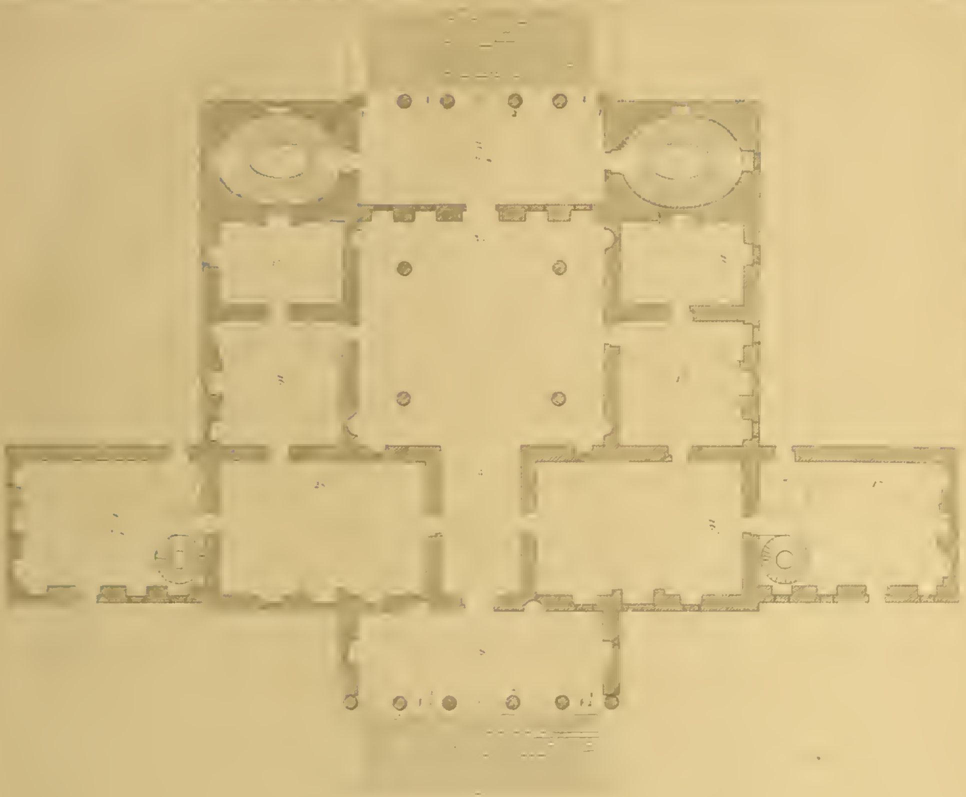
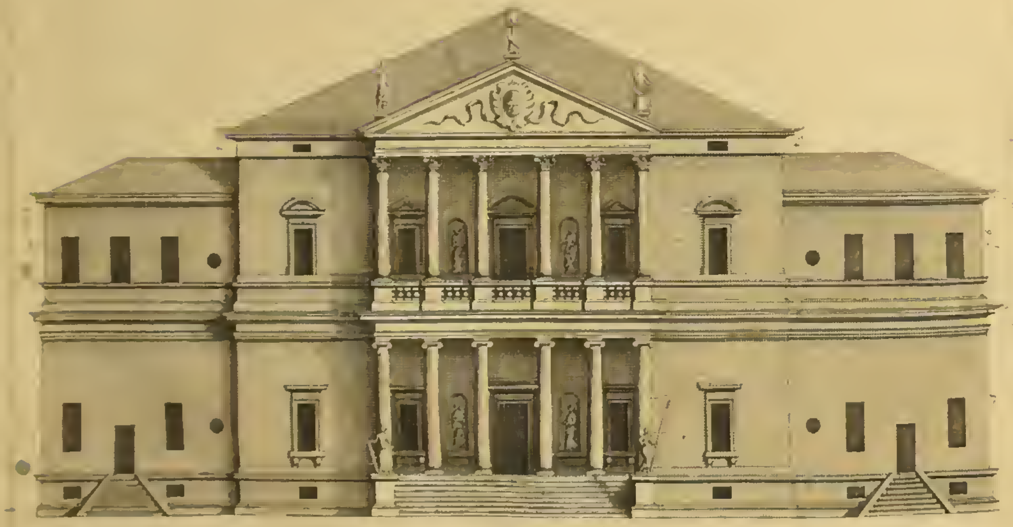
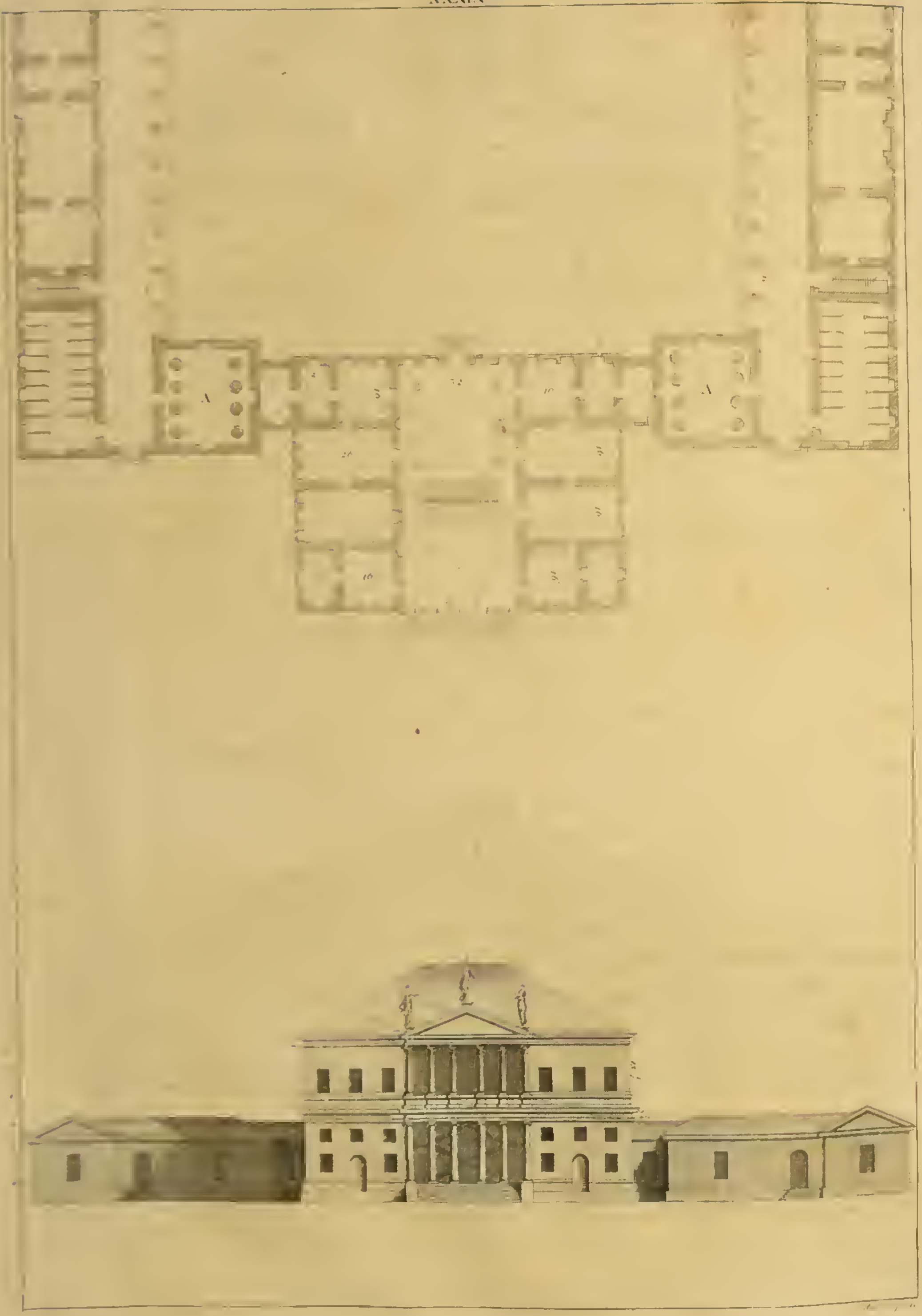
XXXVII







XXXIX



that the height of the Arch is much finer and ſurer with them. The four Niches, which you perceive there have each a Statue, repreſenting the four ſeaſons of the Year, done by *Aleſſandro Vittoria*, an excellent Sculptor. The firſt Order of Columns is *Dorick*, and the ſecond *Ionick*. The upper Rooms are ceil'd. The height of the Hall reaches as far as the roof. On the Flanks of this Houſe, there are two wings, join'd to the Houſe by two paſſages, which lead into the Kitchen and to ſome other Offices; in the middle of each of them there are two arch'd Gates which open into two Streets.

The following draught * is the Houſe of the magnificent Lord *George Cornaro* in *Piombino*, a place of *Caſtle-franco*. The firſt Order of the Portico is *Ionick*. The ſtair-caſe is as far as well can be into the Houſe, that it may be leſs expos'd to heat or cold. The wings of the Hall, wherein you ſee the Niches, have the third part of their own length in breadth; and the Pillars range with the laſt but one of the Porticos exactly, and are as diſtant from one another as they are high. The great Rooms are a ſquare and three quarters long; the height of the Arches is according to our firſt method of the height of Arches. The ſecond-ſize Rooms are ſquare, and a third higher than broad. The Arches are croſs-grinded. Over the Cloſets are *Mezanino*s, or half Stories. The upper Portico is of the *Corinthian* Order: its Pillars are a fifth part leſs than the lower ones. The Chambers are ceil'd, and above them are ſome *Mezaninos*. The Kitchen, and places belonging to it, are on one ſide; and on the other are places for the Servants.

The Building of the following draught † belongs to the moſt illuſtrious Knight *Leonardo Mocenico*, in a place call'd *Morocco*, on the road from *Venice* to *Trevigi*. The Cellars are level with the ground, and above them are the Granaries on the one ſide, as the Servants Lodgings are on the other. Over theſe are the Maſter's Rooms, forming four Apartments. The Arches of the greateſt are one and twenty foot high, and are made of Canes, that they may be the leſs heavy. Thoſe of the leſſer ones are as high as thoſe of the largeſt; but thoſe of the Cloſets are only 17 foot high, and are croſſed. The Gallery of the firſt ſtory is *Ionick*. In the lower Hall there are four Columns, which make the height and breadth to be proportionable. The ſecond Order of the Portico is *Corinthian*, and its *Poggio*, or Pedeſtal, is two foot and three quarters high. The ſtair-caſes are in the middle,

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* *Plate* XXXVIII. † *Plate* XXXIX.

ſeparating the Hall from the Veſtibule: both Stairs are oppoſite the one to the other, to the end that People may go up and come down both ways, which makes them very fine and convenient, beſides that they are light enough. On the wings of this Building are the Wine-preſſes (*mark'd on the Plan* A) with the Stables, Galleries, and ſuch like places fit for a Country Family.

At *Fanzolo* in the *Trivigian*, within three Miles of *Caſtel-franco*, may be ſeen the Houſe of the magnificent Lord *Leonardo Emo*, built according to the following draught *. The Cellars, Granaries, Stables, and other places for a *Villa*, are on each ſide of the Maſter's Houſe; at each end of which there is a Pigeon-houſe, which, beſides the ornament to the place, brings likewiſe profit to the Owner. People may go under ſhelter every where about this Houſe, which is one of the moſt conſiderable conveniencies that ought to be deſir'd in a Country-houſe, as we have already obſerv'd. On the back of this Building there is a ſquare Garden, which contains fourſcore *Trivigian* Acres; in the midſt of which runs a little River, which renders the ſituation very fine and agreeable. This Houſe is adorn'd with ſeveral pieces of painting done by *Battiſta Venetiano*.

CHAP. XV.

The Draughts of ſome Noblemen's Seats on the Terra Firma.

IN a place of the *Vicentine*, call'd *Final*, is the following Houſe †, which belongs to the Lord *Biagio Sarraceno*. The floor of the Rooms is rais'd five foot from the ground. The great Chambers are a ſquare and five eigths long, their height being equal to their breadth, and are all ceil'd. This height is alſo continu'd in the Hall. The Cloſets near the Galleries are arch'd: the height of the Arches is equal to that of the Rooms. The Cellars are below, and the Granaries above, being of the ſame extent with the whole Houſe. The Kitchens are without, but ſo near that they are convenient enough: all the other places, neceſſary to a Country-houſe, are on the two ſides of the Building.

The draughts that follow ** are of the Houſe of Signior *Girolamo Ragona*, a *Vicentine* Gentleman, who built it at one of his

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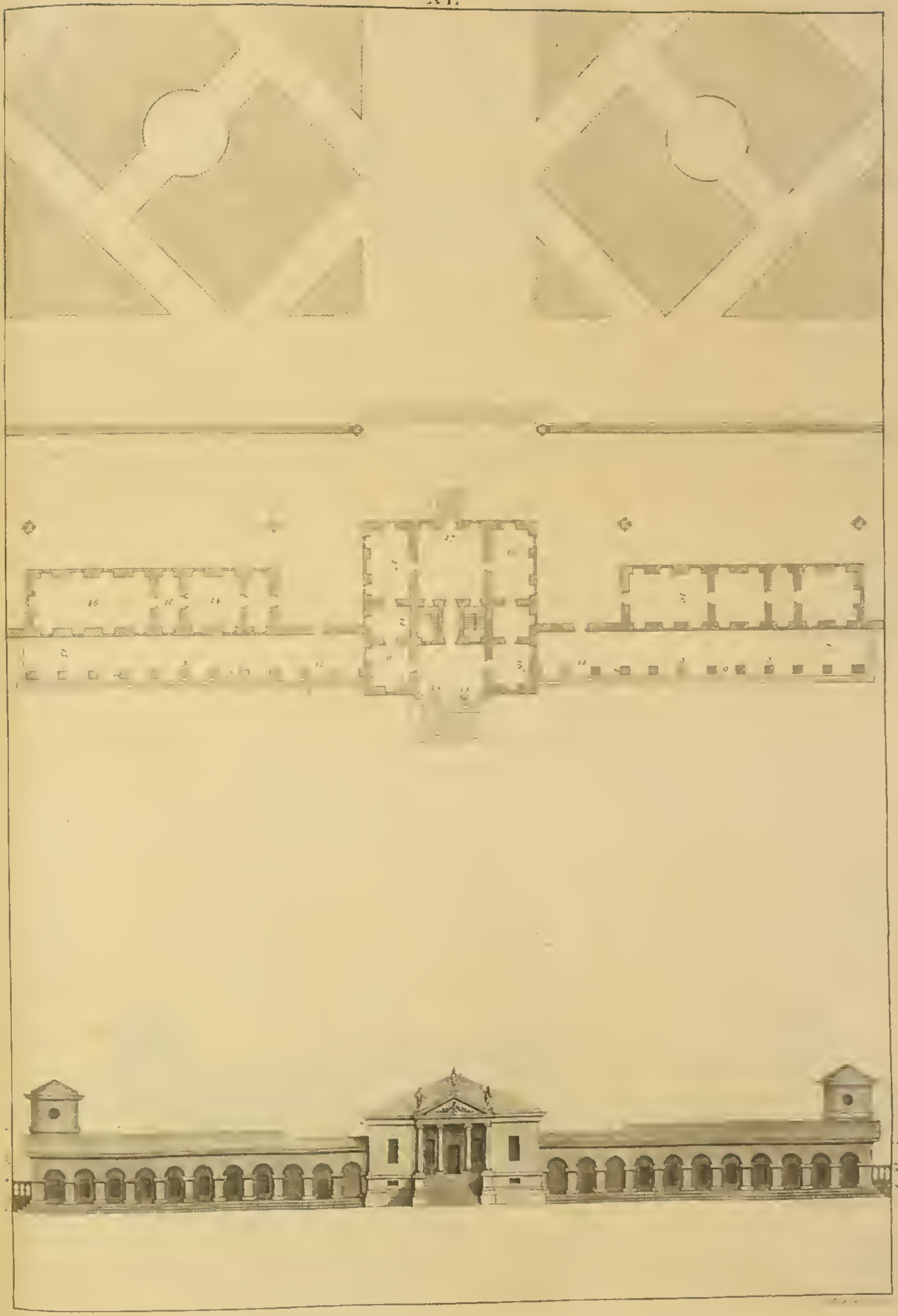
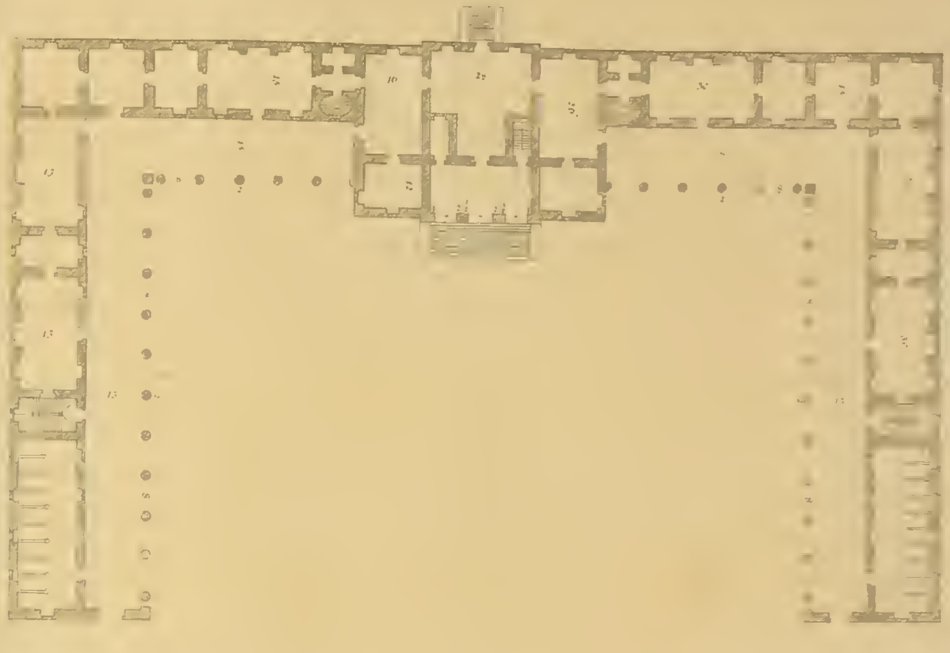
* *Plate* XL. † *Plate* XLI. ** *Plate* XLII.

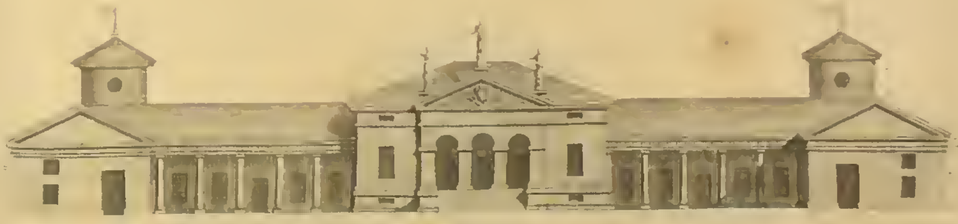
Lordſhips

XL.

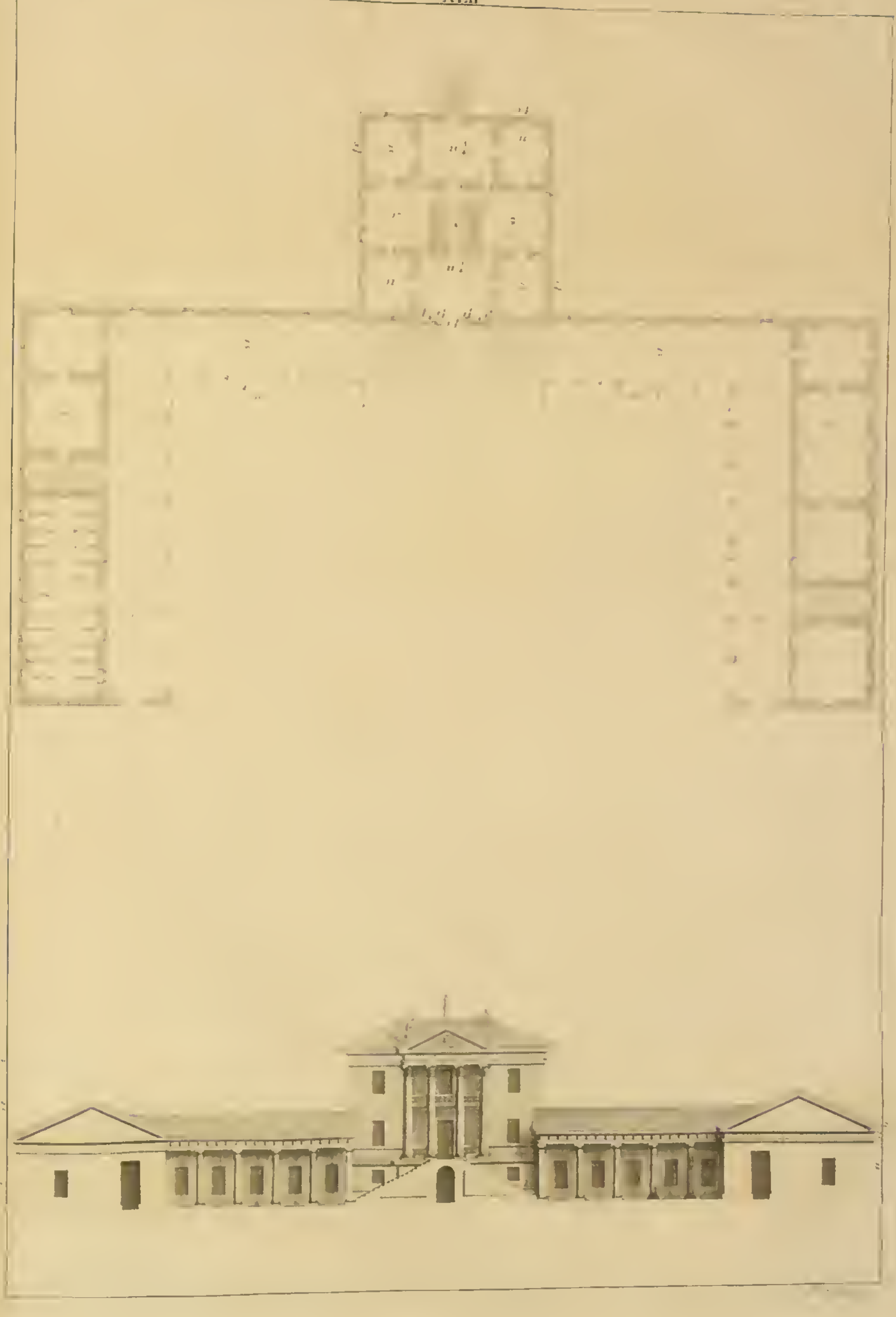


XLI

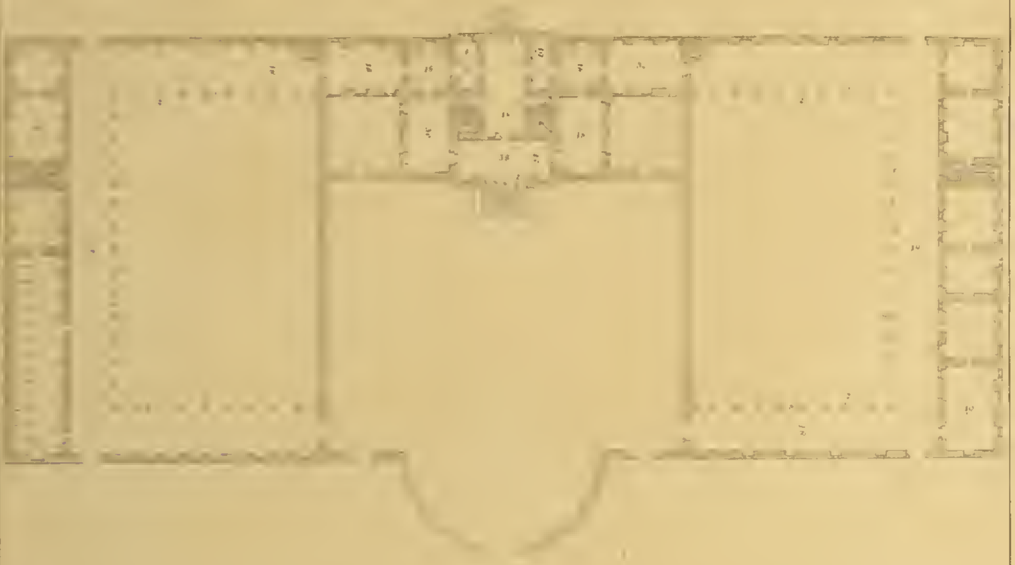


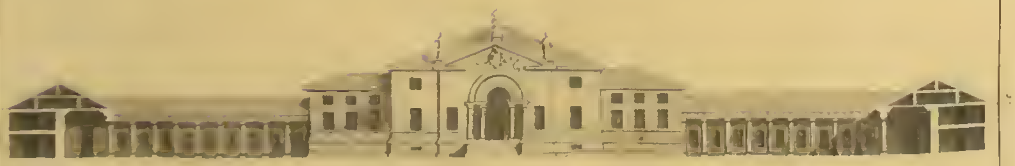


XLII

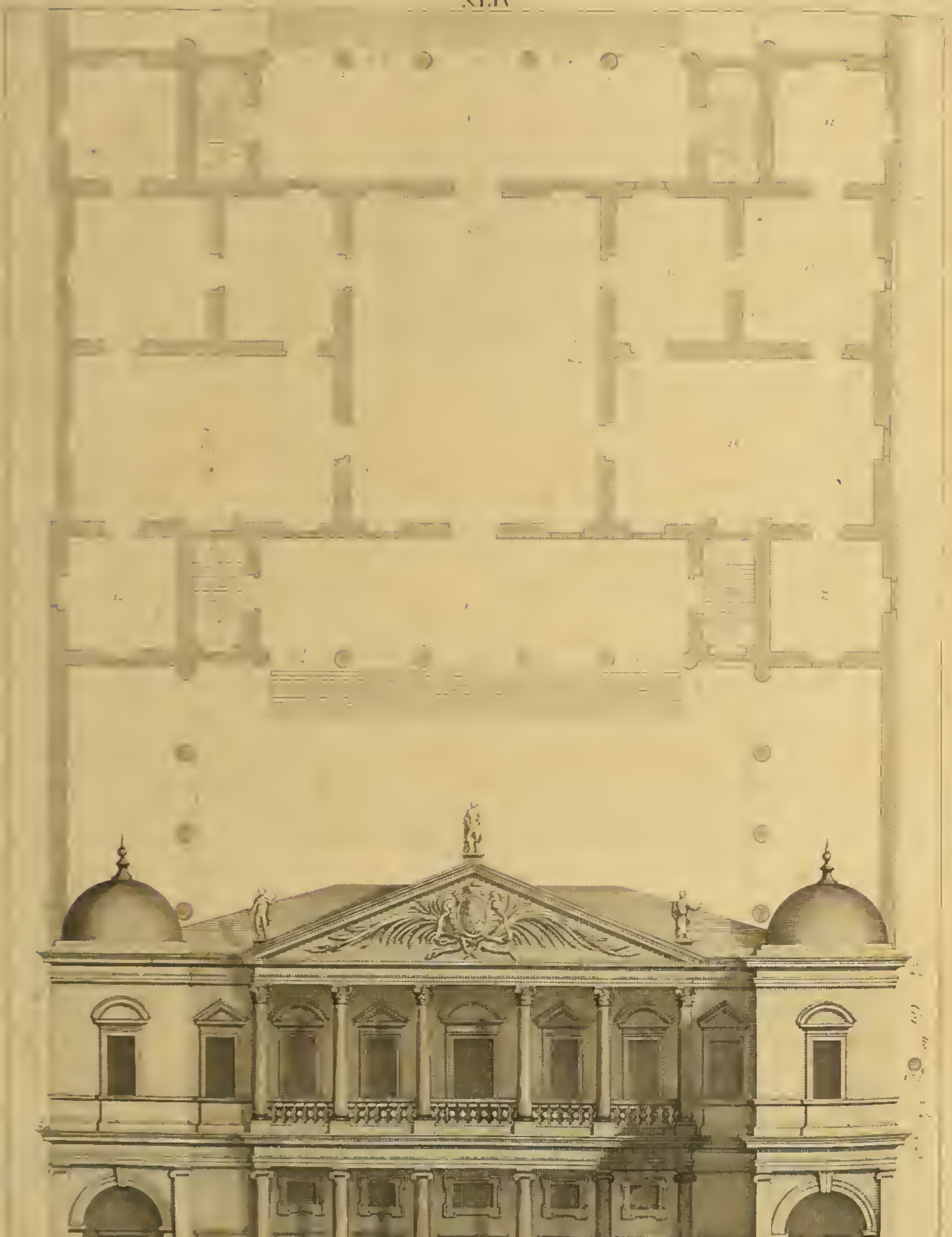


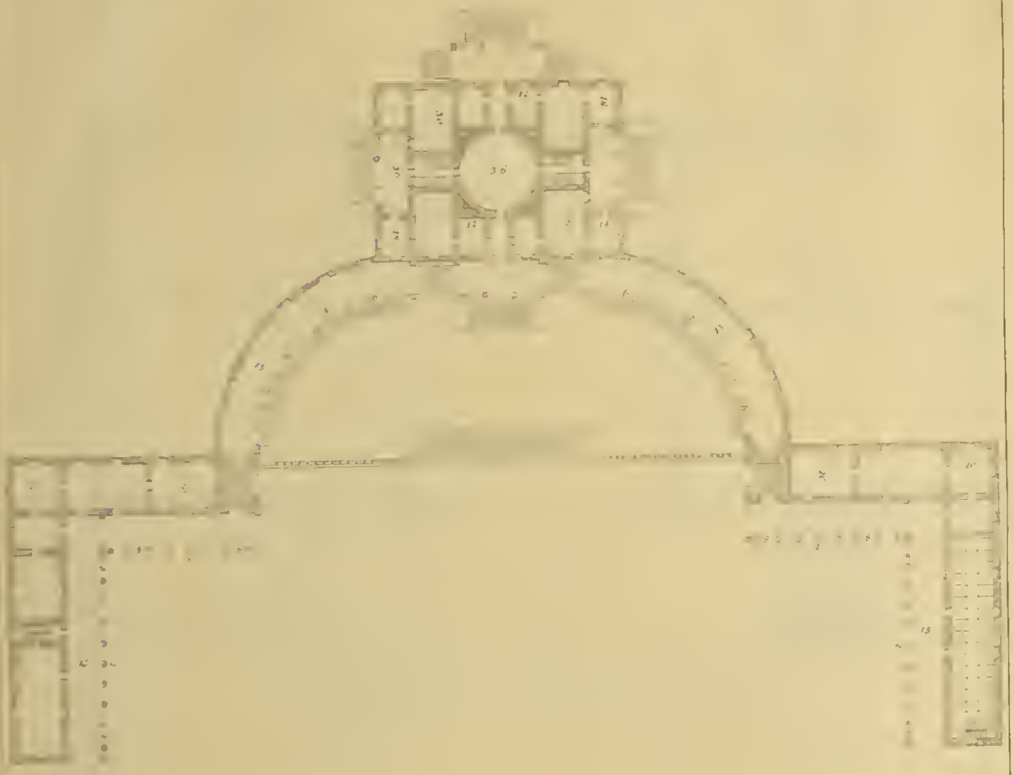
XLIII





XLIV

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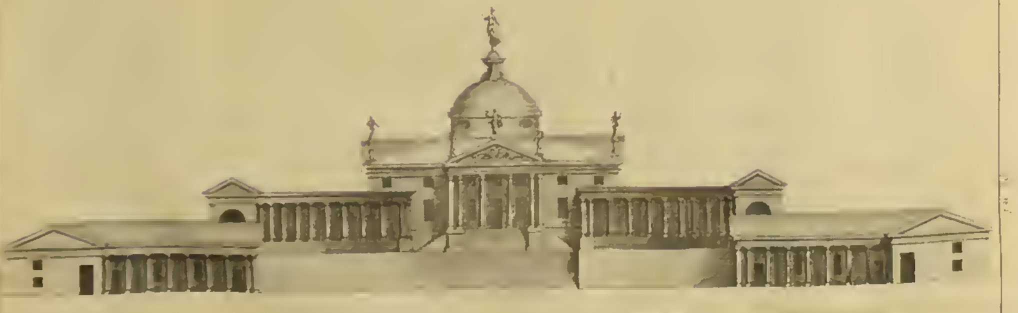

Lordſhips call'd *le Ghizzole.* This Houſe has the ſame conveniency I have mention'd above, which is, that one can walk every-where under covert. The floor of the Maſter's Apartments is rais'd twelve foot above the ground. Under theſe are all the conveniencies for the Houſhold. Above are other Chambers, which may not only ſerve for Granaries, but alſo for Lodgings upon occaſion. The principal ſtairs are in the fore-front, and anſwer directly to the Porticos of the Court.

At *Pogliana*, a place in the *Vicentine*, is the following Houſe *, belonging to the Cavalier *Pogliana.* The Rooms have been adorn'd with paintings and very fine ſtuccatures by *Meſſer Bernardino India* and *Meſſer Anſelmo Canera*, Painters of *Verona*, and by *Meſſer Bartholomeo Rodolfi*, Sculptor of the ſame place. The great Rooms are a ſquare and two thirds long, and arch'd. Over the Cloſets are *Mezaninos.* The height of the Hall is one half more than its breadth, and is equal to the height of the Gallery. The Hall is arch'd with a *Faſcia*, and the Portico with a croſs-grinded Arch. The Granaries are above all theſe Apartments, as the Cellars and Kitchen are under them; becauſe the floor of the firſt ſtory is rais'd five foot above the ground. The lower yard, and other places for the uſe of a Country-houſe, are on one ſide of it, and a Garden which anſwers to the yard is on the other ſide. Behind the Houſe is an Orchard and a Fiſh-pond: ſo that this Gentleman, who is magnificent, and of a noble ſpirit, has ſpar'd nothing which he thought might bring ornament or conveniency to this Houſe, in order to make it as fine, delightful, and compleat as poſſible.

At *Liziera*, a place near *Vicenza*, Signior *Gio. Franceſco Valmarana*, of bleſſed Memory, built the following Houſe †. The Galleries or Porticos are *Ionick*; the Columns are upon a ſquare baſe which ſurrounds the whole Houſe. To the level of this baſement is the floor of the Gallery and Rooms, which are all ceil'd. At the Angles of this Building there are four arch'd Towers; the Hall is alſo arch'd with a *Faſcia.* This Houſe has two Court-yards, the one forwards for the uſe of the Maſter, and the other backwards, where they threſh the Corn. About this Court are coverts, and all other places neceſſary to a Country-houſe.

The Counts *Franceſco*, and *Ludovico de Triſſini*, Brothers, began the Building of the following ** Draught at *Meledo*, a place in the *Vicentine.* Its ſituation is very fine, being on a Hill, that's waſh'd by a little River, in the midſt of a ſpacious Plain, and on a well-frequented

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* *Plate* XLIII. † *Plate* XLIV. ** *Plate* XLV.

Road. On the top of the Hill there is to be a Hall encompaſs'd with Rooms; but raiſ'd ſo high that it may receive its Light above them. This Hall has ſome demy-pillars, which ſupport a Corridor, to which People enter by the upper Chambers, which ſerve but for the *Mezaninos*, being only ſeven foot high. Under the floor of the firſt Chambers are the Kitchens, Pantrics, and ſuch like places. And becauſe every front of the Houſe has a very fine proſpect, there are made four Porticos or Galleries to them of the *Corinthian* Order; above the pediments of which one ſees the Cupolo of the Hall. The Galleries that come round it look extraordinary well. The Hay-lofts, Cellars, Stables, Granaries, the Farmer's Lodging, and other Family conveniencies are lower. The columns of the Porticos are of the *Tuſcan* Order; and at the corners of the Court near the River are two Dove-houſes.

This Building * is at *Campiglia*, a place of the *Vicentine*, and belongs to Signor *Marſo Repeta*, who finiſh'd it according to the deſign of the late Signor *Franceſco* his Father of bleſſed Memory. The Pillars of the Porticos are of the *Dorick* Order; the intercolumnation is four diameters of a column. In the two remoteſt corners of the Roof, where one ſees the Galleries, without the main body of the Houſe, there are two Dove-houſes and Galleries. On the ſide towards the Stables are divers Chambers, every one dedicated to ſome particular Virtue, as one to Juſtice, another to Chaſtity, and others to other Virtues, with Elogiums and Pictures appropriated to the ſubject. Part of theſe were done by *Battiſta Maganza*, a *Vicentine* Painter, who is alſo an excellent Poet, and who has done all this deſignedly, that as the Gentleman receives thoſe who viſit him moſt courteouſly, ſo he may lodge every one of his Gueſts and Friends in the Apartment of that Virtue to which he thinks them moſt inclined. In this Building one may go every where conveniently under Piazzas. And ſince the Farm-houſe is of the ſame Order with that of the Maſter's it ſelf, all that this laſt wants in greatneſs by not being more coſtly than the other, is ſufficiently made up to the former, by being equal both in ornament and ſymmetry.

The following Houſe † belongs to the two Brothers, the Counts *Edward* and *Theodore de Thieni*. It ſtands in a place call'd *Cigogna*, where Count *Francis* their Father began to build it. The Hall is in the middle of the Houſe, and round it are ſome *Ionick* Pillars, which ſupport a Corridor which is level with the floor of the upper Rooms. The Arch of this Hall reaches to the roof.

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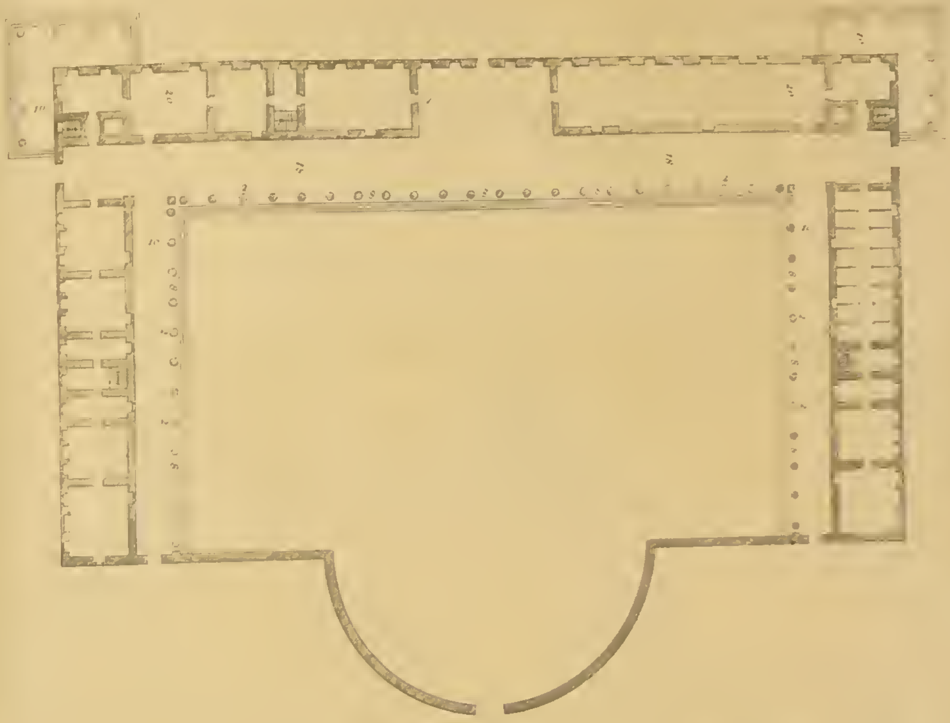
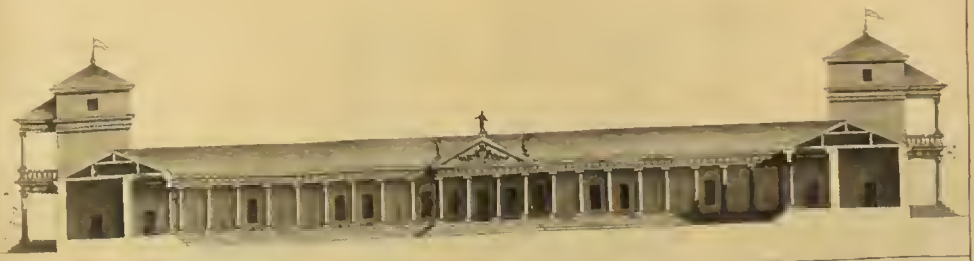
* *Plate* XLVI. † *Plate* XLVII.

LXIX





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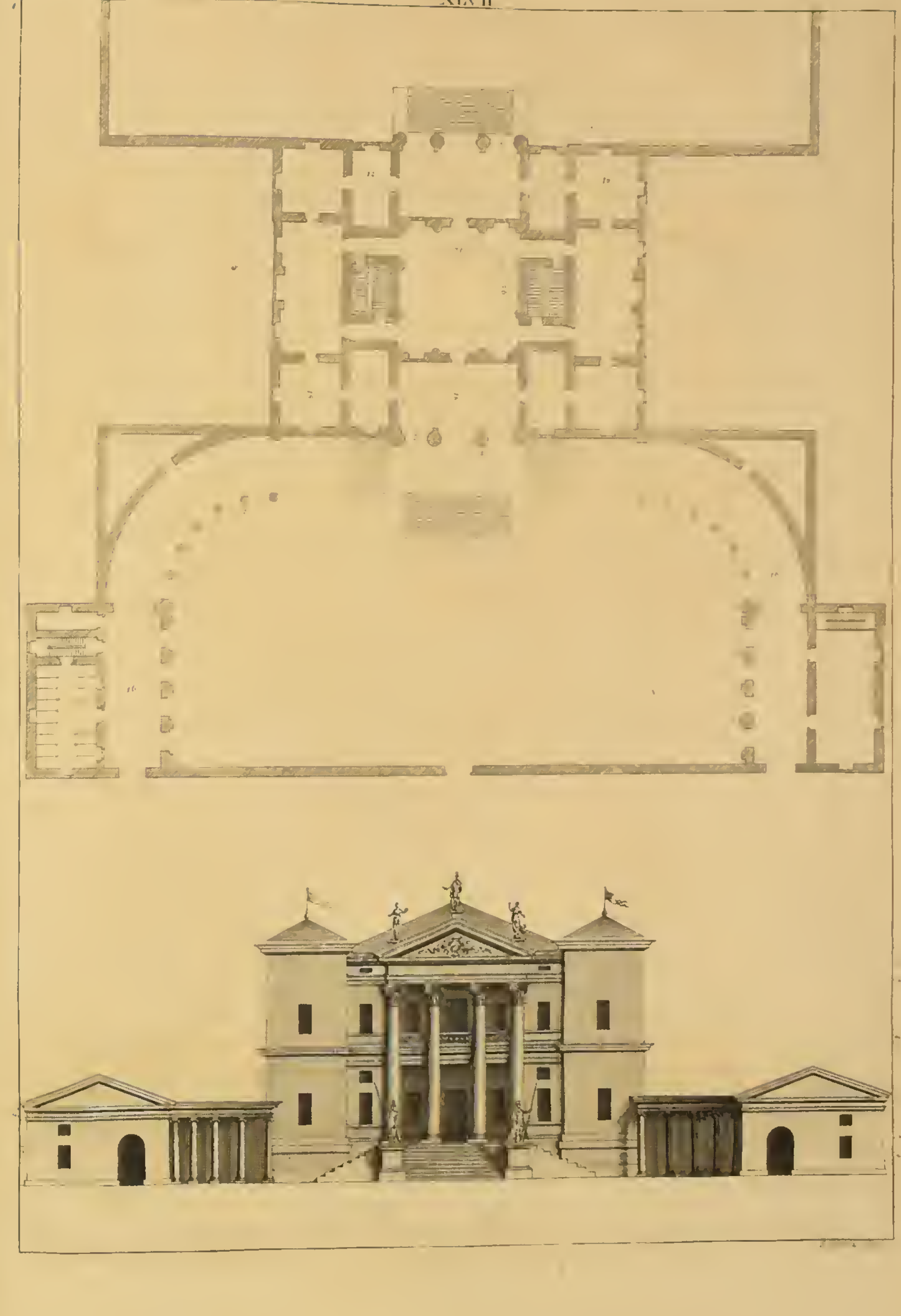
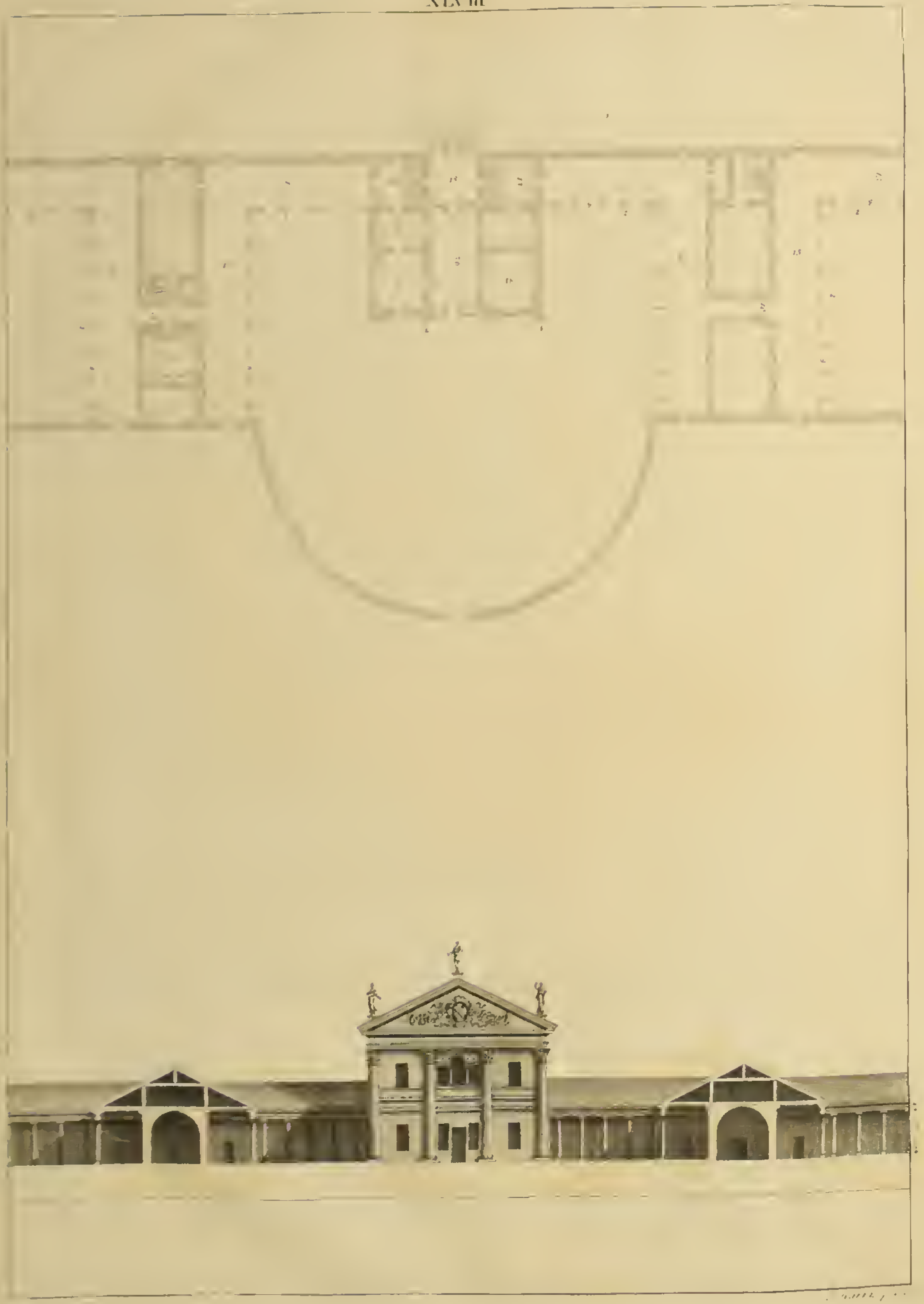
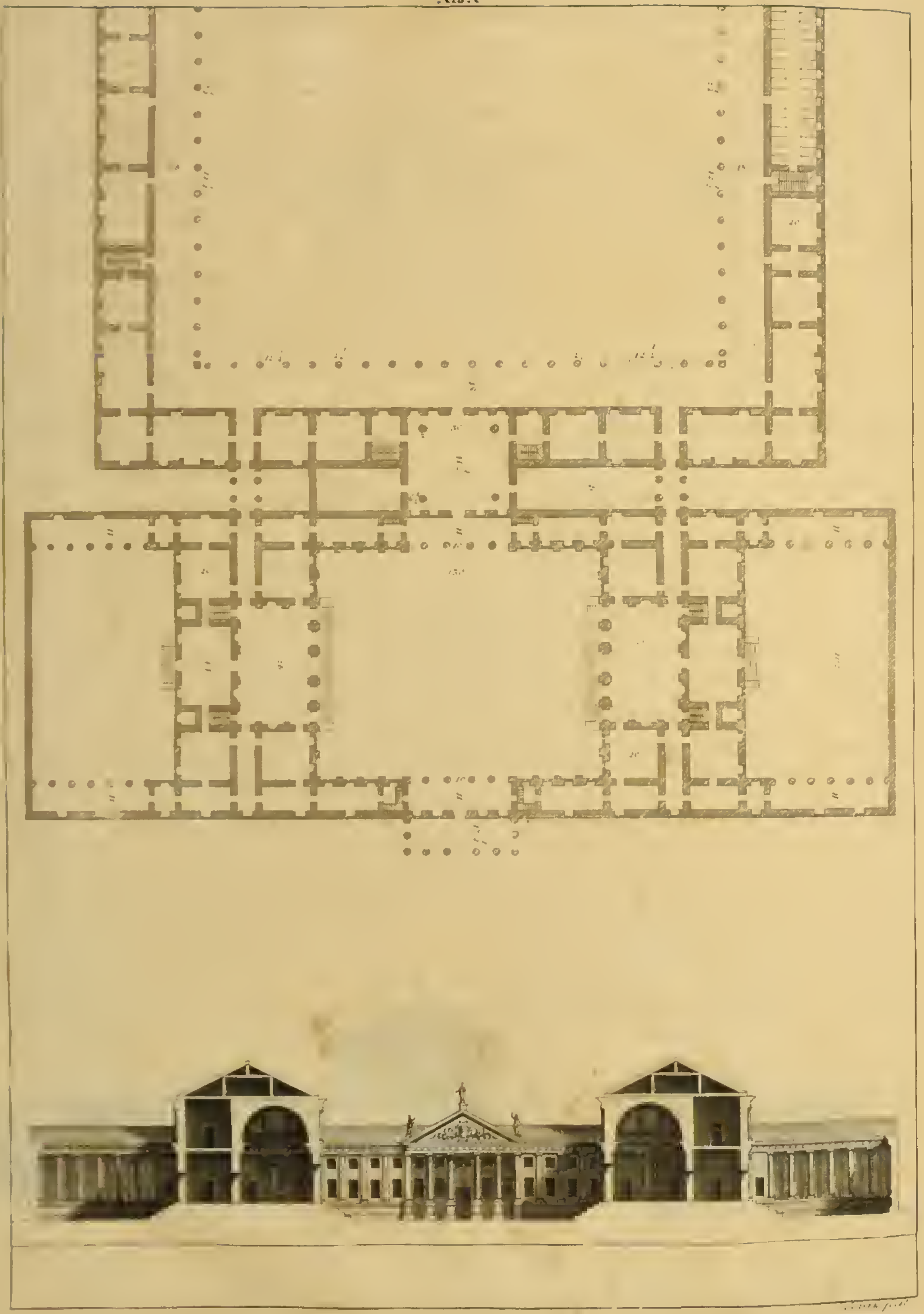


XLVIII



XLIX



The great Rooms are arch'd with a *Faſcia*, the ſquare ones Oven-wiſe, and are rais'd in ſuch a manner, that they form four little Turrets on the angles of the Building. The Cloſets have *Mezaninos* above them, whoſe doors are over-againſt the middle of the Stairs, which have no Wall in their middle: and as the Hall, by receiving its light from above, is extraordinary lightſome, theſe *Mezaninos* are alſo ſufficiently light; and by ſo much the more, as they have their light from the top, being open in the middle. The Cellars and Granaries are in one of the cover'd ſides, or Arches of the yard; and in the other are the Stables, with the other places ſerving for Country uſes. The two Galleries, that make as it were the two arms of the main Building, ſerve to unite the Farmer's Houſe to that of the Maſter. There are two yards with Porticos, the one ſerves to lay up the crop, the other to lodge the Husbandmen and their Servants.

The following Houſe * belongs to Count *Giacomo Angarano*, who built it in his Lordſhip of *Angarano*, a place in the *Vicentine*. On both ſides of the Court are the Cellars, the Granaries, the Wine-preſſes, the Farmer's Houſe, the Stables, with the Dove-houſe; and beyond there is on one ſide a Court or Yard for the Country neceſſaries, and on the other ſide a Garden. The Maſter's Houſe is in the middle, all the firſt ſtory of it being arch'd, and the ſecond ceil'd. The Cloſets, both above and below, have *Mezaninos*. The *Brenta*, a River very plentiful of excellent Fiſh, runs near this Building. The place is famous for its delicious Wines and Fruits, but more eſpecially for the courteſy of its Lord.

The following draughts † are of Count *Ottavo Thieni*'s Houſe, in a place call'd *Quinto*. This Building was begun by Count *Marc Antonio* his Father, of happy Memory, and by Count *Adriano* his Uncle. The ſituation is very fine, for it has the *Teſſina* on one ſide, and a pretty large branch of the ſame River on the other. This Palace has a Gallery before its Gate of the *Dorick* Order, thro which one paſſes into another Gallery; and from that into the Court, which has alſo two Galleries in its wings, at the end of which are all the Rooms and Apartments, of which ſome have been painted by *Giovanni Indemio* a *Vicentine*, and a very ingenious Man. Over againſt the Portico of the entry there is another Gallery exactly like it, which brings you to an *Atrium* with four Pillars, and ſtrait forwards to a Court whoſe Porticos are of the *Dorick* Order. It ſerves for all the uſes of the *Villa*. There is no principal ſtair-caſe, that has any proportion to the reſt of the Building; becauſe the upper part of this Houſe ſerves only for Wardrobes, Stores, and Lodgings for the Servants.

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* *Plate* XLVIII. † *Plate* XLIX.

At *Lonedo*, a place in the *Vicentine*, is the following Houſe *, belonging to Signor *Girolamo de Godi*. It is ſituated on a little Hill that has a very fine proſpect, near a River that furniſhes it with Fiſh. To render this ſituation proper for Country purpoſes, they have made yards and paſſages ſupported by Arches at a very conſiderable Expence. The Maſter's and Families Apartment is in the middle of the Building. The floor of the Chambers is rais'd thirteen foot from the level of the ground, and they are ceil'd. The Granaries are above; and below, under the raiſing of the thirteen foot, are the Cellars, Kitchens, places to make Wine, and other neceſſary conveniencies. The height of the Hall is to the very roof, and it has two rows of Windows. At each ſide of the Houſe there are great yards with coverts, ſerving for Country uſes. The Houſe is painted with great nicety by Meſſer *Gualterio Padoano*, Meſſer *Battiſta del Moro* of *Verona*, and Meſſer *Battiſta Venetiano*: for this Gentleman having a mind to make his Houſe as perfect as poſſible, and having himſelf no ſmall judgment, ſpar'd no coſt to get the moſt excellent Workmen and Artiſts of our time.

At *Santa Sophia*, a place within five Miles of *Verona*, is the following Houſe †, which belongs to Count *Marc Antonio Sarego*. Its ſituation is on a very fine Hill of a moſt eaſy aſcent, between two Vallies, from whence one ſees a great part of the City. Round about are ſeveral other Hills very agreeable to the Eye, and abounding with excellent Waters, whereby the Houſe and Garden are adorn'd with ſeveral admirable Fountains. By reaſon of its agreeableneſs, this place was formerly the delight of the Lords *de la Scala*; and we may alſo judge, by ſome old Ruins which are found there, that in the time of the antient *Romans* it was in great eſteem. That part of this Building which ſerves for the Maſter's Apartment and his Family, has a Court wholly ſurrounded with Porticos. The Pillars are of the *Ionick* Order, and courſly wrought, as ſeems to become a Country-houſe, to which nice and finiſh'd Works bears not ſo true a reſemblance as plain and natural ones. Theſe Pillars ſupport the Cornice, which makes the Gutters that receive the Rain that falls from the top of the Houſe; and behind are ſome pilaſters under the Porticos, that bear the floors of the ſecond ſtory. In this ſame ſecond ſtory are two Halls over-againſt one another, the largeneſs of which may be ſeen in the draught ** by the lines that go croſs each other, and

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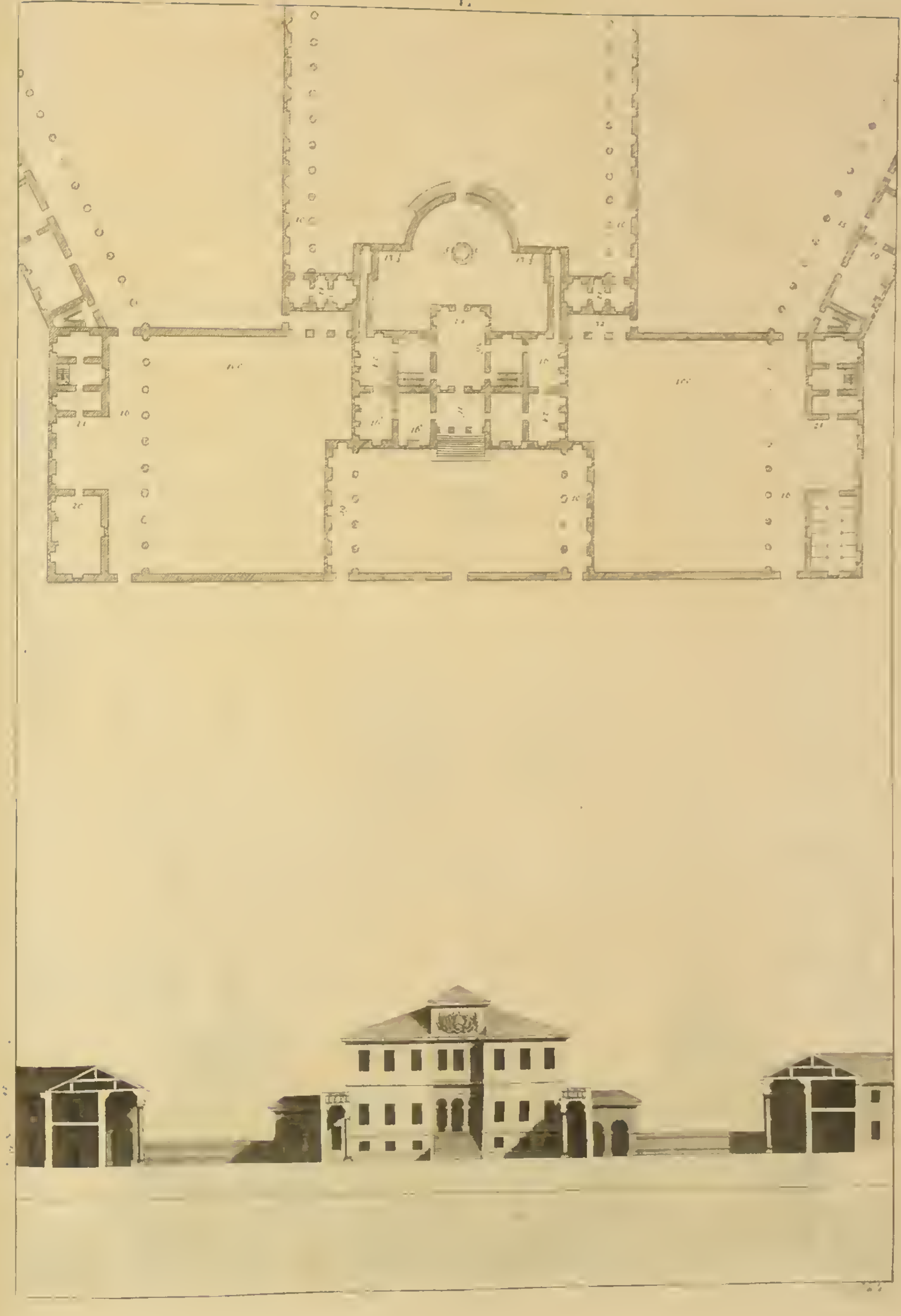
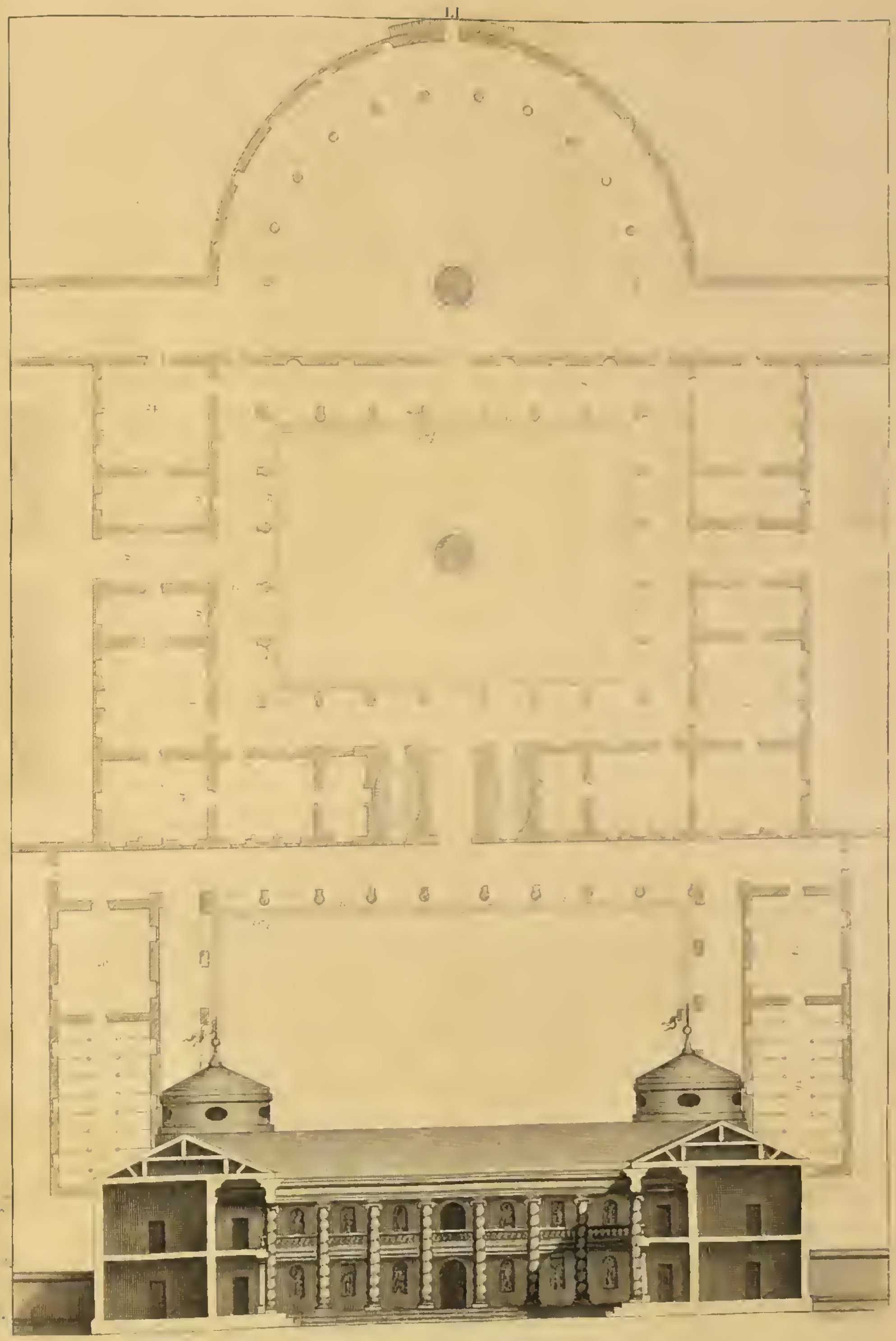
* *Plate* L. † *Plate* LI. ** *Plate* LI.

L





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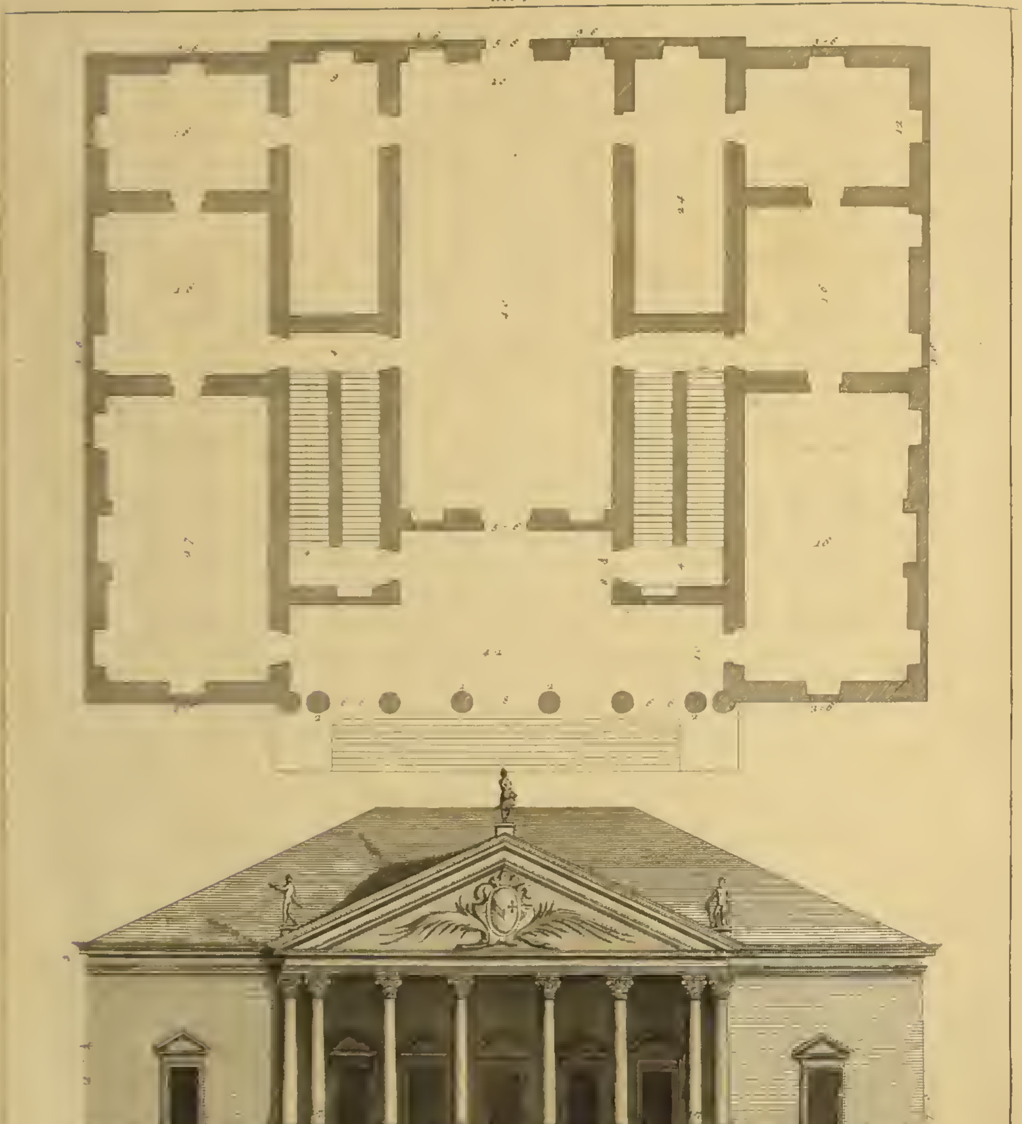
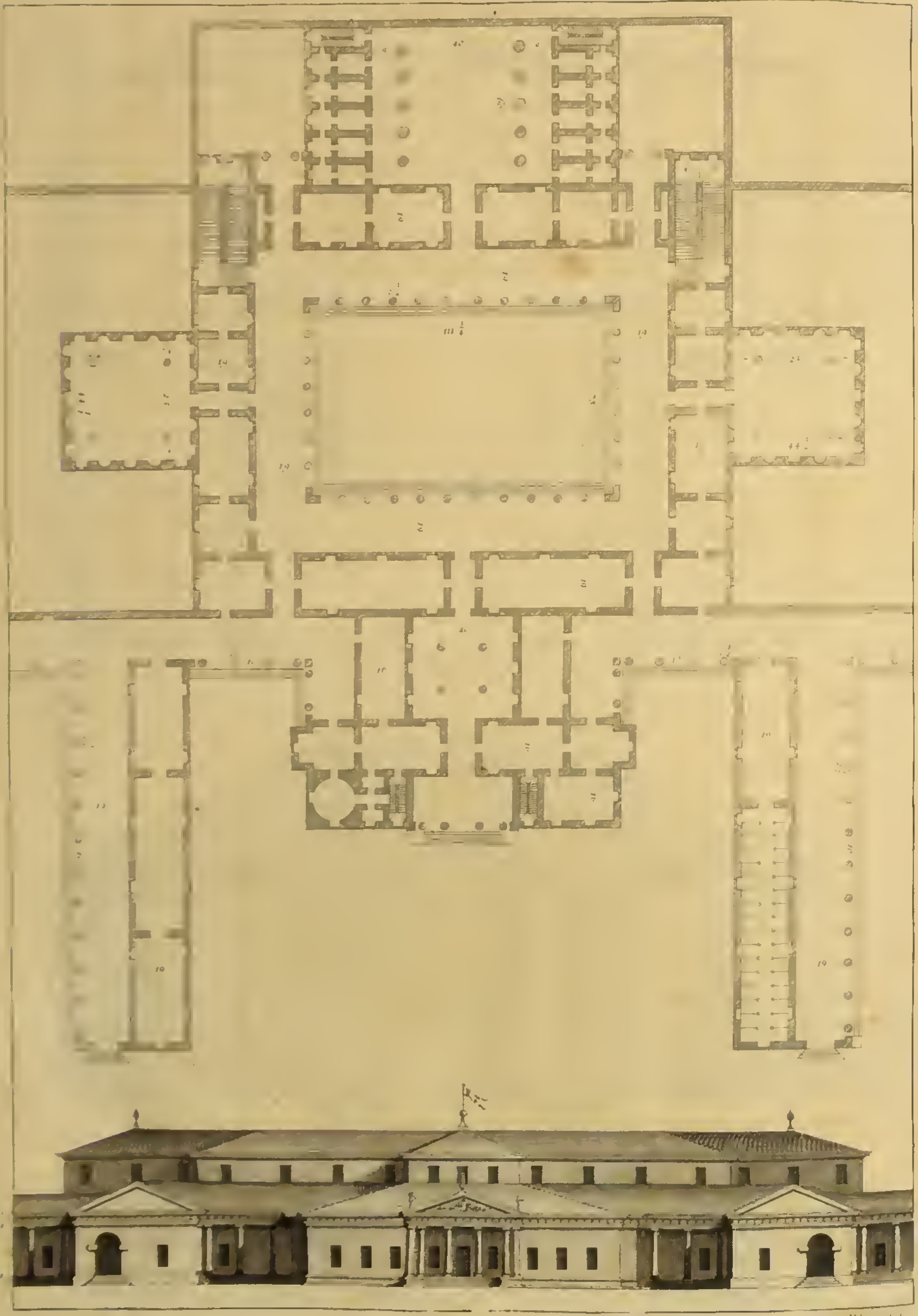


LIII



are carry'd on from the further Walls to the Pillars. Near this Court is the Farmer's yard, where there are on both ſides all the coverts neceſſary for Country matters.

The following * is the Houſe of Count *Annibal Serego*, in a place of the *Collogneſe* called *la Miga.* The whole Building is rais'd on a Pedeſtal or Baſement four foot and a half high; level to which is the floor of the firſt Chambers; under which are the Cellars, Kitchens, and other places for the Lodgings or other uſes of the Family. The firſt Chambers are arch'd, and the ſecond ceil'd. The Farmer's yard, with all the Country conveniencies, is near the Houſe.

CHAP. XVI.

Of the Country-houſes of the Antients.

HITHERTO I have given the draughts of ſeveral Country-houſes done by my direction: it remains that I now give you ſome † after the manner of the Antients, according to what *Vitruvius* has deliver'd; for in theſe you may ſee all the places belonging to the Lodgings, and the conveniencies of the Country, turn'd to the regions of the Heaven that are moſt proper, I ſhall not here inſiſt upon what *Pliny* ſays about this Subject, my deſign being only at preſent to explain what *Vitruvius* ſays of it. The principal front of the Building is turn'd to the South, and has a Gallery, from which one enters by a paſſage into the Kitchen, which receives its light above the places adjacent, as it muſt have the Chimney in the middle. On the left-hand ſide are the ſtalls for the Oxen, the manger whereof muſt be turn'd to the Eaſt The Bagnios muſt alſo be on the ſame ſide, and at the ſame diſtance from the Kitchen as from the Gallery, becauſe of the room they require. On the right hand you have the Oil-preſſes, and other places for the Oil, which anſwer the places of the Bagnios, and are turn'd to the Eaſt, South, and Weſt. The Cellars are backwards, far from all noiſe, and open to the North for fear of the Sun. The Granaries are above, and receive the ſame light, and the ſame way as the Cellars do. On the right and left ſides of the Court are ſtalls for the Cattle, ſtables for the Horſes, conveniencies for Sheep and other Animals; with Hay-lofts and Barns to put the Straw in, as well as Bake-houſes, all which muſt be as far from any Fire as may be. The Maſter's Habitation is backwards, the principal front of which is oppoſite to the Farmer's Houſe; ſo that in theſe Country Buildings the Halls are always in the back part. All the ſame things were obſerv'd in theſe, whereof we have ſpoken above, in giving the draughts of the private Houſes of the antients, which is the reaſon why I have had no regard now but to what purely concerns the Country. In all the Buildings which I have made in the Country, and alſo in ſome of thoſe in Towns, I have always plac'd the Pediments before, where the principal Gates are; becauſe they make the principal entry to the Houſe more obſervable, and contribute very much to the magnificence and nobleneſs of the Building. This gives the fore-part a great advantage over the others, and therefore it muſt be made higher; beſides that it is much properer to put there the Arms of the Owner, which are commonly plac'd in the middle of them. The antients employ'd them alſo in their works, as is to be ſeen in the old remains of Temples and other publick Buildings; from which 'tis probable, as I have obſerv'd in the Preface to my firſt Book, that they borrow'd the contrivance and proportions of private Houſes. *Vitruvius*, in the laſt Chapter of his third Book, teaches us how to make them.

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* *Plate* LII. † *Plate* LIII.

CHAP. XVII.

Of ſome Inventions ſuited to different ſituations.

MY firſt intention was not to write but of thoſe Buildings only that were brought to their perfection, or at leaſt ſo far advanc'd, that one could ſoon hope to ſee them finiſh'd: but having obſerv'd, that it is often neceſſary to confine ones ſelf to the ſituations, and that one has not always free room to build, I have thought it would not be amiſs to add to my former draughts ſome new inventions of my own (which were deſir'd of me by ſeveral Perſons of Quality, tho ſome alterations in their affairs have obſtructed the execution) becauſe the irregularity and difficulty of their ſituation, and the method I have obſerv'd to contrive the Chambers and other places, ſo as to be correſpondent and proportionable to each other, may, in my opinion, prove of no little uſe and advantage.

The ſituation of this firſt draught * is of a pyramidal form: the baſis of the Pyramid makes the principal front of the Houſe,

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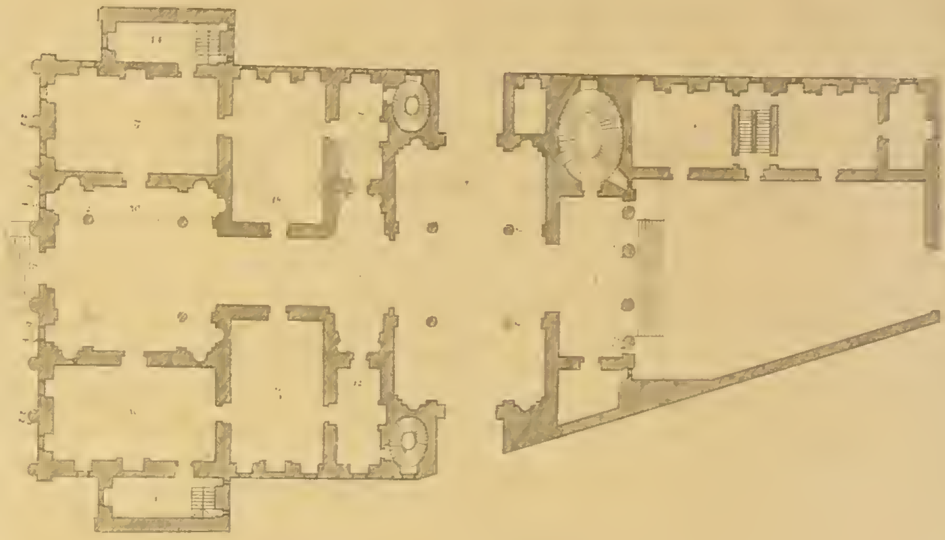
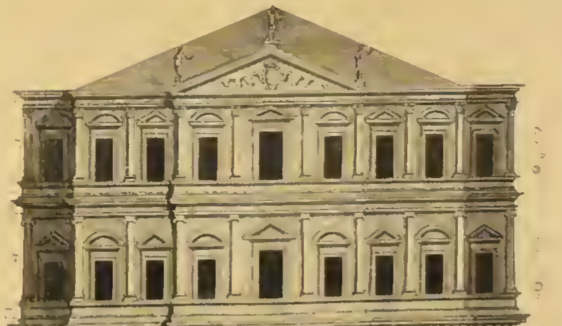
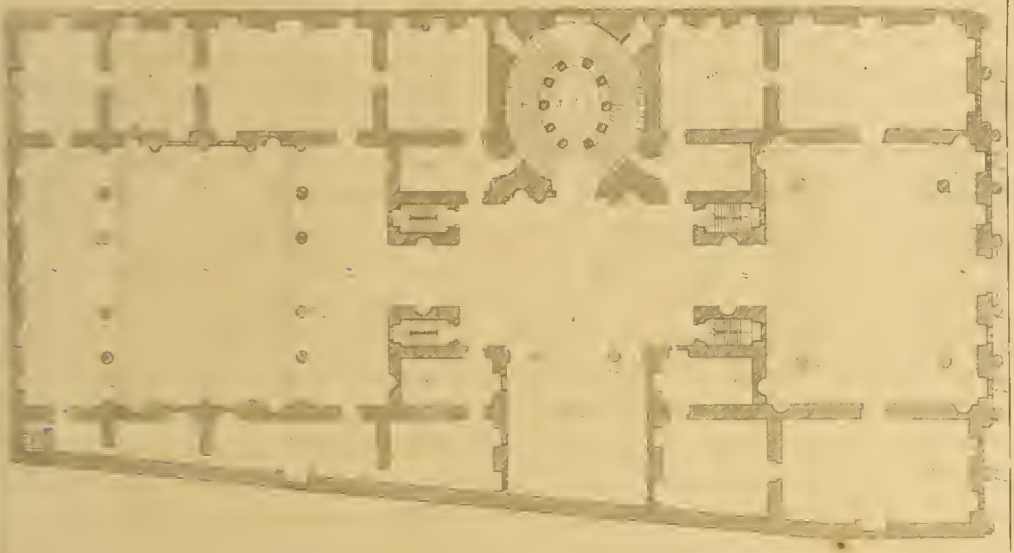
* *Pl.* LIV.

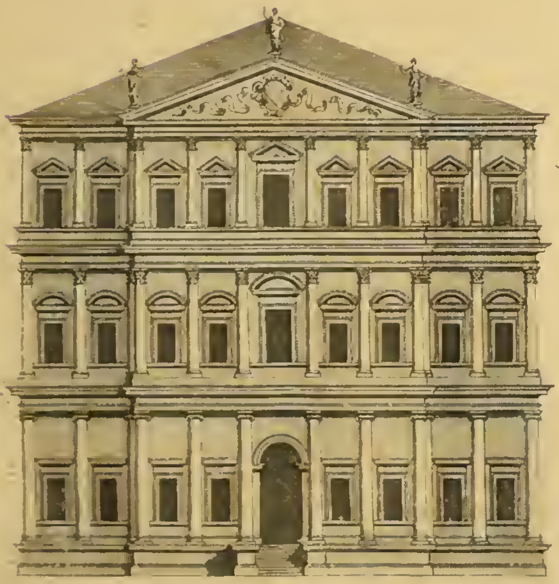
LIV





IV





which has three Orders of Pillars, *Dorick*, *Ionick*, and *Corinthian*. The *Veſtibule* is ſquare, and its Arch, the height and breadth whereof is equal, is ſupported by four columns. On the one and the other ſide are two Chambers, whoſe length is a ſquare and two thirds, and they are arch'd after our firſt way. They have every one a Cloſet, with a ſmall Stair-caſe to go up to the *Mezaninos*. At the end of the entry I had plac'd two Chambers a ſquare and a half long, with two Cloſets near them of the ſame proportion, which would alſo have had their ſtairs to the *Mezaninos*: and farther, I contriv'd a Hall of a ſquare and two thirds long, with columns equal to thoſe of the *Veſtibule*. Next to this there had been a Gallery, on both ſides of which I would have plac'd two out-ſtairs, and farther on a yard, in one ſide of which ſhould be the Kitchen. In the ſecond ſtory the Chambers were to be twenty foot high, and thoſe of the third eighteen: but the height of each of the Halls was to be quite to the roof, and level with the Chambers of the ſecond ſtory; the Halls would have had ſome Balconies, or Corridors, wherein to place Perſons of diſtinction at the time of Feſtivals, Banquetings, or ſuch like diverſions.

I made the following draught * for a ſituation in *Venice*. The principal front has three Orders of columns, the *Ionick*, the *Corinthian*, and the *Compoſite*. The *Veſtibule* advances a little outwards, and is adorn'd with four columns, equal and like to thoſe of the front. The Chambers, which are on the wings, are arch'd after our firſt method. Beſides theſe, there are other Chambers that are ſmaller, and Cloſets with ſtairs to go up to the *Mezaninos*. At the end of the entry one goes thro a paſſage into a ſecond Hall, which on one ſide has a little Court, by which it receives its light, and on the other the principal Stair-caſe of an *Elliptical* form, and open in the middle, with columns all round, that ſupport the ſteps. Farther on you have another paſſage whereby to enter into a Gallery, the columns of which are *Ionick*, and equal to thoſe of the *Veſtibule*. On each ſide of this Gallery there is an Apartment like thoſe at the entry, but that on the left hand is in a place which contracts it a little more. Hard by there's a Court adorn'd quite round with columns, which form a Corridor, that ſerves for the Apartment of the Women, wherein they cook, and which therefore ſhould be backwards. The upper part is like the lower one, except the Hall; which is above the entry, has no columns, and is rais'd to the roof, having a Corridor that is level to the Chambers of the third ſtory, and might alſo ſerve the upper Windows, becauſe this Hall has two rows of them. The floor of the leſſer Hall will be of the ſame height with the Arches of the ſecond Chambers, theſe being twenty three foot high. The Chambers of the third ſtory are eighteen foot high, and ceil'd. All the Doors and Windows would be directly perpendicular over one another, and each Wall would bear its ſhare of the weight, where the deſign executed. The Cellars, Landries, and other Offices, would have been under ground.

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* *Plate* LV.

Some time ago I made the following draught *, at the requeſt of the two Brothers Count *Franciſco* and Count *Lodoico de Triſſini*, for a place they had in the City of *Vicenza*; according to which the Houſe would have had a ſquare *Veſtibule*, divided into three ſpaces by rows of *Corinthian* columns, to give more ſtrength and proportion to its Arch. On the wings would have been two Apartments, with ſeven Rooms in each, including three *Mezaninos*, for which the ſtairs, which are next the Cloſets, would have ſerv'd. The height of the great Rooms was to be twenty ſeven foot; that of the leſſer, and leaſt of all but eighteen. Farther in you would have found a Court, ſurrounded with Galleries of the *Ionick* Order. The columns of the firſt floor of the fore front were alſo to be *Ionick*, and equal to thoſe of the Court; thoſe alſo of the ſecond floor were to be *Corinthian*. The Hall would have been wholly free, of the ſame bigneſs with the *Veſtibule*, and rais'd up to the roof; and level to the floor of its *Soffita* there would have been a Corridor. The great Rooms would have been ceil'd, but the leſſer and ſmalleſt ones arch'd. The Womens Apartment, with the Kitchen and the like Offices, were to be on one ſide of the Court; as the cellars, a place for firing, and the reſt of the Houſhold conveniencies, were to be under ground.

This other invention † was for Count *Giacomo Angarano*, who had alſo a ſpot of ground in the ſame City. The columns of the front are of the *Compoſite* Order. The Chambers on the ſide of the entry are a ſquare two thirds long. Cloſe to them there is a Cloſet, with a *Mezanino* above it. After this, you paſs to a Court ſurrounded with *Porticos*, the columns whereof are thirty foot, with Pilaſters behind them (which *Vitruvius* calls *Paraſtates*) to ſupport the floor of the ſecond Gallery, upon which there is yet another open one, level with the higheſt floor of

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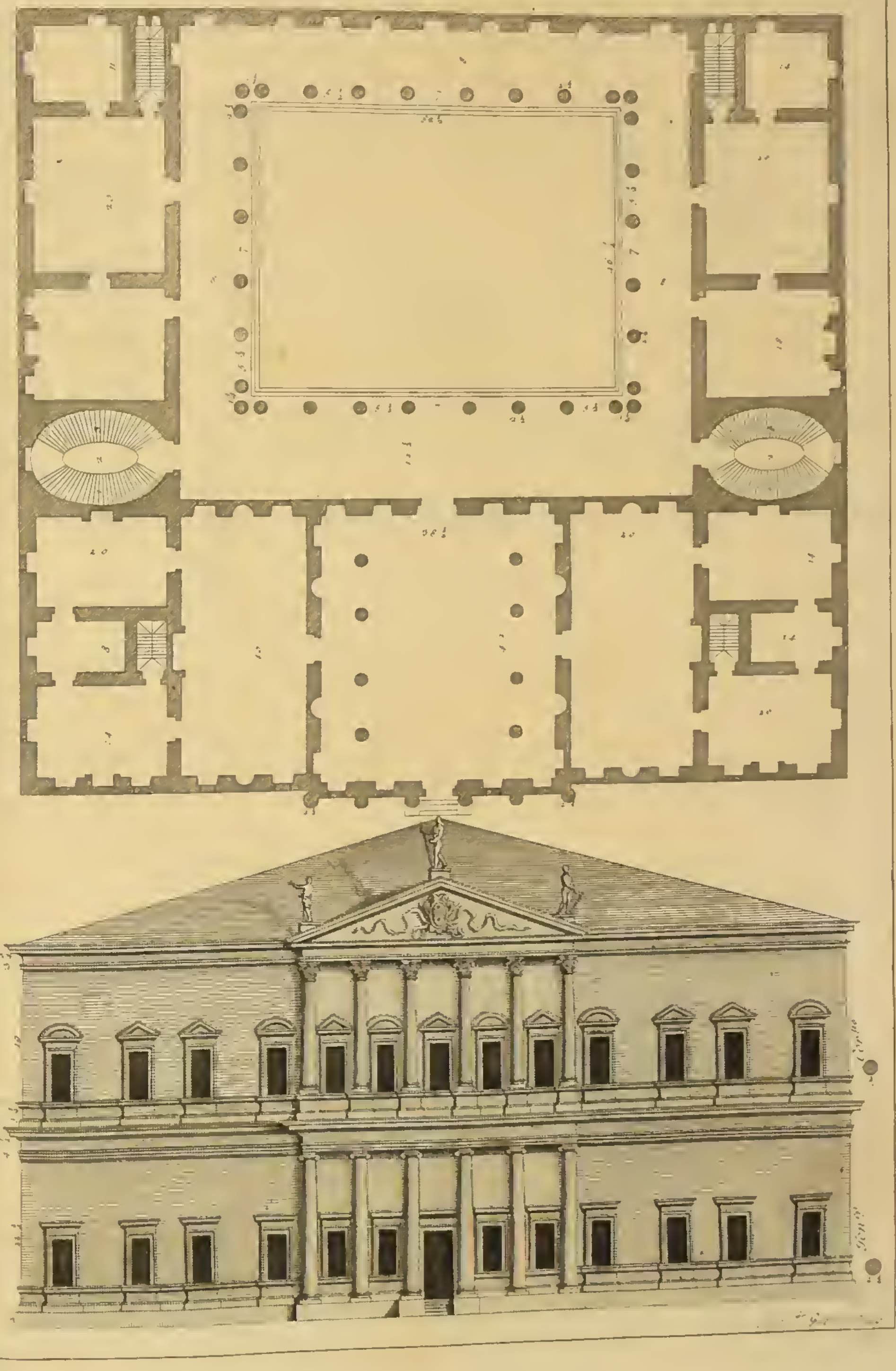
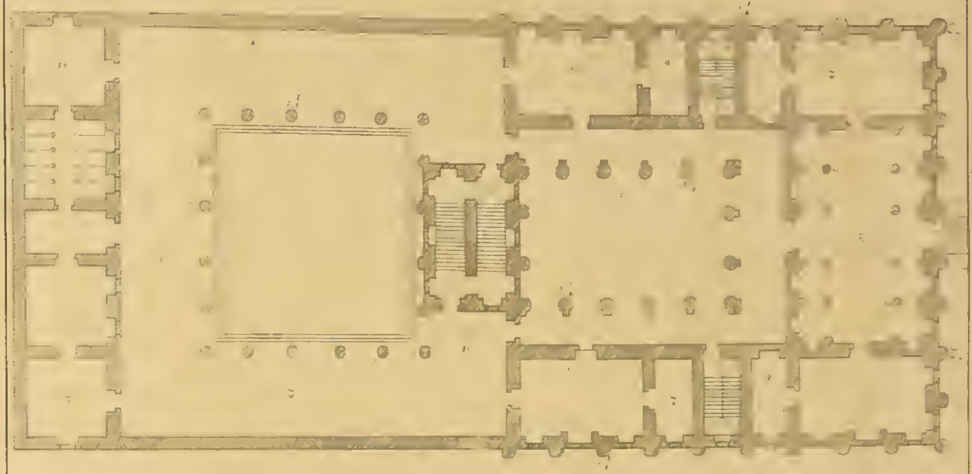
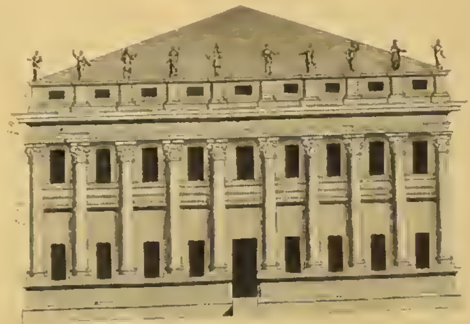
* *Plate* LVI. † *Plate* LVII.

LVI

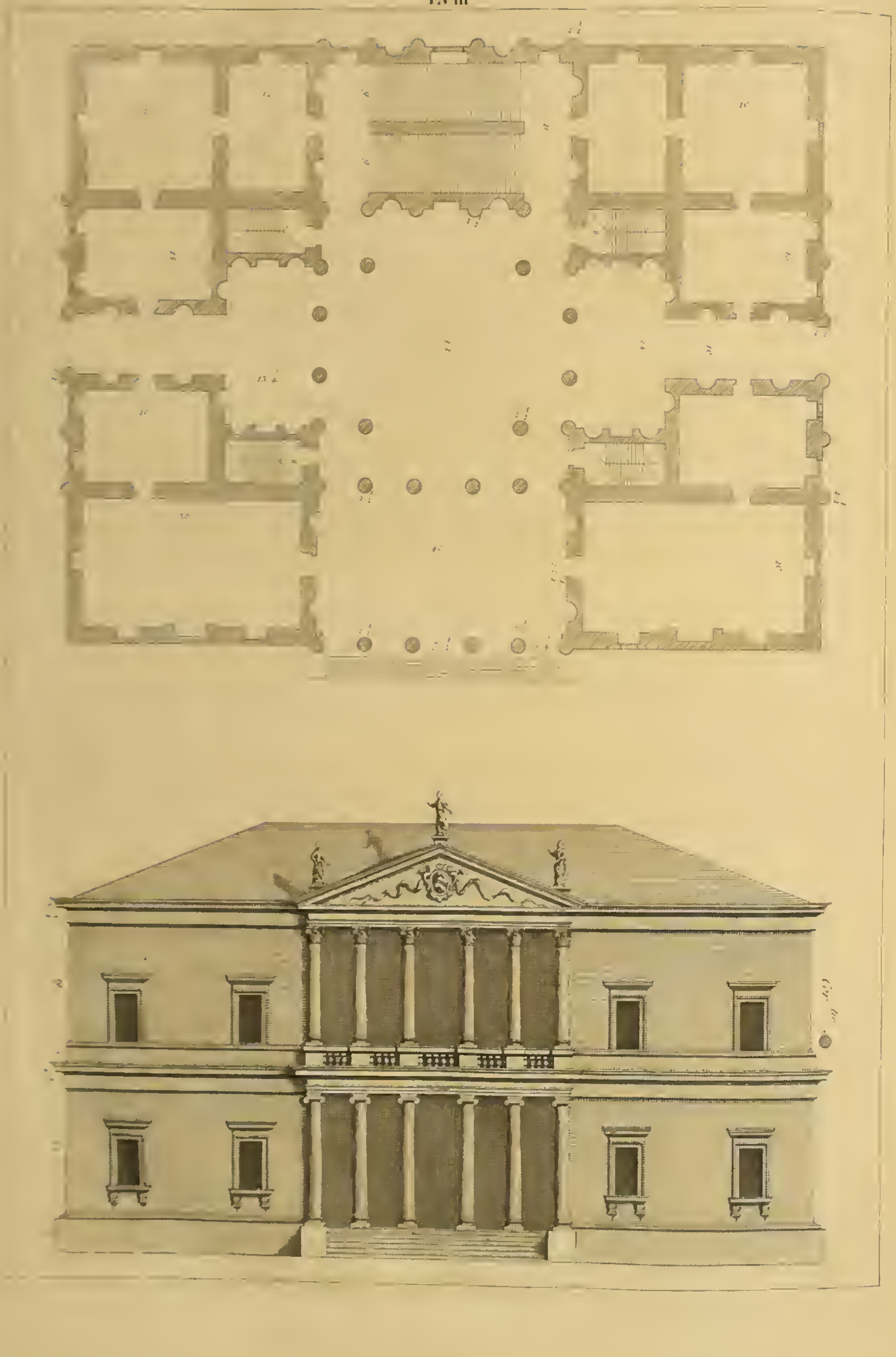


LVII

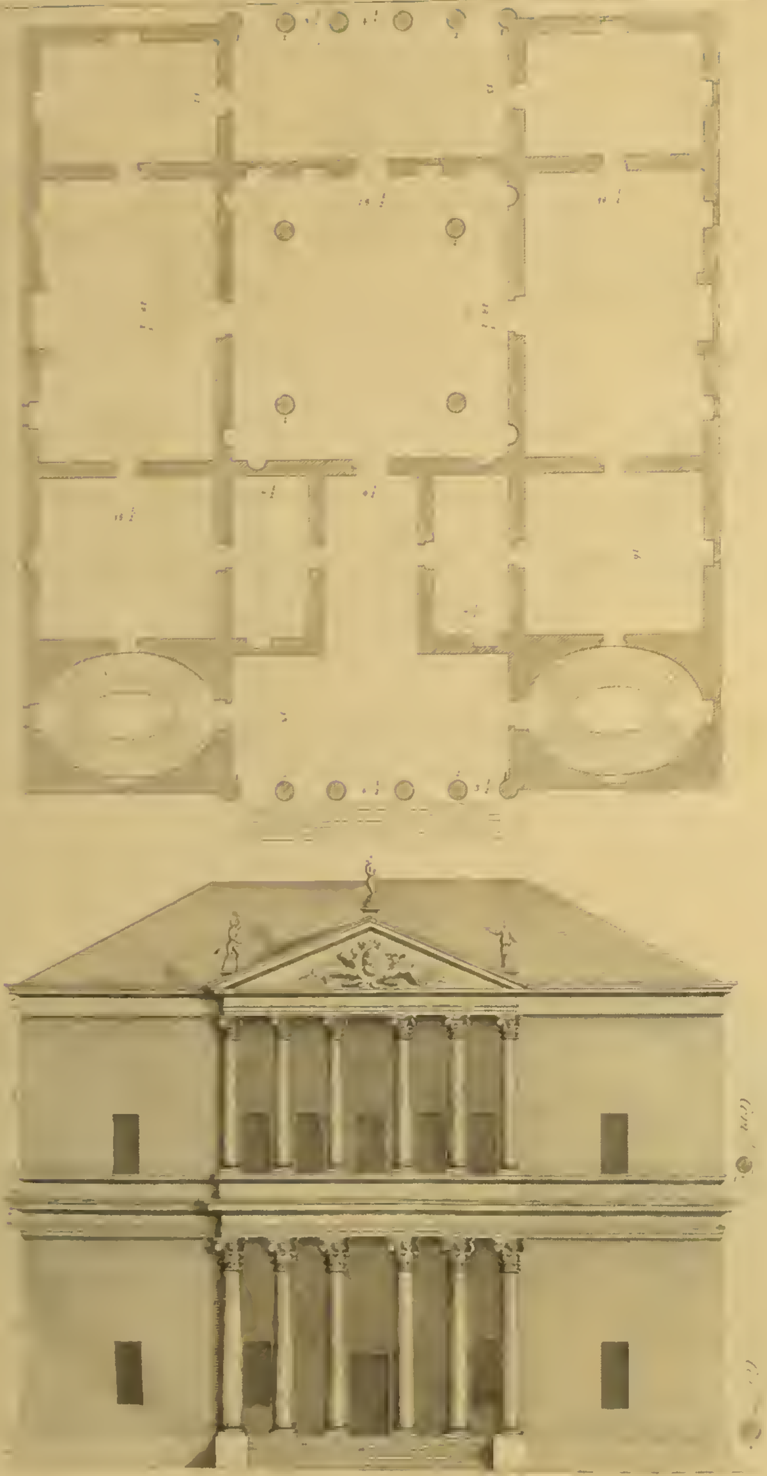




LVIII



LIX



the Houſe, rail'd all round. Farther in, you find yet another Court, ſurrounded alſo with *Porticos*; the columns of the firſt Order of which are *Dorick*, and of the ſecond *Ionick*. The ſtairs are in the Court, and oppoſite to them are Stables, where might alſo be plac'd the Kitchen and the Servants Lodgings. As to the upper part, the Hall ſhould have been without columns, and its Ceiling muſt have reach'd to the roof of the Houſe. The Chambers would have been equally high and broad, having Cloſets and *Mezaninos* like the lower ones. One could make a Corridor upon the Columns of the fore-front of the Houſe, which might be very convenient on ſeveral occaſions.

In *Verona*, on a very fine ſituation called *Gli Portoni della Brà*, Count *Gio. Battiſta della Torre* had a mind to build according to the following draught *. The Houſe was to be adorn'd with Gardens, and all manner of imbelliſhments that can make a place convenient and delightful. The firſt Rooms were to be arch'd, and above all the little ones would have been *Mezaninos*, with ſmall ſtairs to go up to them. The Chambers of the ſecond ſtory were to be ceil'd. The height of the Hall was to be as far as the roof, and level with the floor of the *Soffit* would have been a Corridor or Balcony. It was to receive its light from the Gallery, and from the Windows it was to have on the wings.

I had alſo given to Signor *Gio. Battiſta Garzadore*, a *Vicentin* Gentleman, the following draught †, in which there are two Galleries after the *Corinthian* Order, the one before and the other behind. Theſe Galleries have their *Soffits*, and the lower Hall alſo, which is in the inner part of the Houſe; that during the Summer they may be cool there, and it has further two rows of Windows. Its *Soffit* is ſupported by four columns, which likewiſe ſupport the floor of another ſquare Hall that is above it, but without columns. It is almoſt as high as it is broad, and indeed only higher, as the Cornice is in thickneſs. The Arches of the great Rooms are rais'd after our third method, and thoſe of the Cloſets are ſixteen foot. The upper Rooms are ceil'd. The columns of the ſecond Galleries are *Compoſite*, and a fifth part leſs than the lower ones. Upon theſe Galleries are *Frontons*, which give, as I have already ſaid, a great air and nobleneſs to a Building, making it appear higher in the middle than on the wings; beſides that, they alſo ſerve to contain the Arms of the Family.

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* *Plate* LVIII. † *Plate* LIX.

The illuſtrious Signor *Leonardo Mocenigo* deſir'd I ſhould make the following draught * for a ſpot of ground he had on the *Brenta.* Four Galleries, of a quarter of a circle each, like the Arms of the Houſe, ſeem to accoſt and embrace all thoſe that come towards it. The Stables are on the ſides of theſe Galleries, in the fore part, that looks to the River; and the Kitchen, with the Farmer's and Huſbandmens Apartments, are on the back part, taking up alſo the ſides. The Gallery, which is in the middle of the fore-front, is after the *Pycnoſtyle* manner, that is to ſay, that the columns are very thick, and near one another; and becauſe theſe columns are forty foot high, they have ſome pilaſters behind them, that are two foot broad, and a foot and three inches thick, which ſupport the floor of the upper Gallery. Further one finds a Court ſurrounded with Galleries after the *Ionick* Order. The *Porticos* are as broad as the Pillars are high, excepting only one diameter of a column. The Galleries and the Chambers that look towards the Gardens, are alſo of the ſame breadth, to the end that the Walls, which make the ſeparation of every Apartment, may be directly in the middle, to bear the weight of the roof. The firſt Chambers would be very convenient Dining-rooms, if there ſhould happen to be great Company in the Houſe. They are of a double proportion. The Chambers on the angles are ſquare, and are arch'd with a *Faſcia.* The impoſt is as high as the diameter of the Chamber, and the Arches are a third part of their breadth in height. The Hall is two ſquares and a half in length: columns are plac'd in, that they may make the length and breadth proportionable to the height; and theſe columns ſhould have been only in the lower Hall, that the upper one might be altogether free and agreeable. The columns of the Galleries above the Court, are a fifth leſs than the lower ones, and are *Corinthian.* The upper Rooms are as high as they are broad. The ſtairs are at the end of the Court, and go up each a contrary way to the other.

With this draught I ſhall, God be prais'd, finiſh theſe two Books, wherein I have endeavour'd with all poſſible brevity to put together, and to teach moſt clearly, as well by Words as by Draughts, all thoſe things that I have thought the moſt neceſſary and important in the Art of Building well; and more particularly with reſpect to private Houſes, which are to be beautiful and magnificent, convenient for the Owner, and creditable for the Builder.

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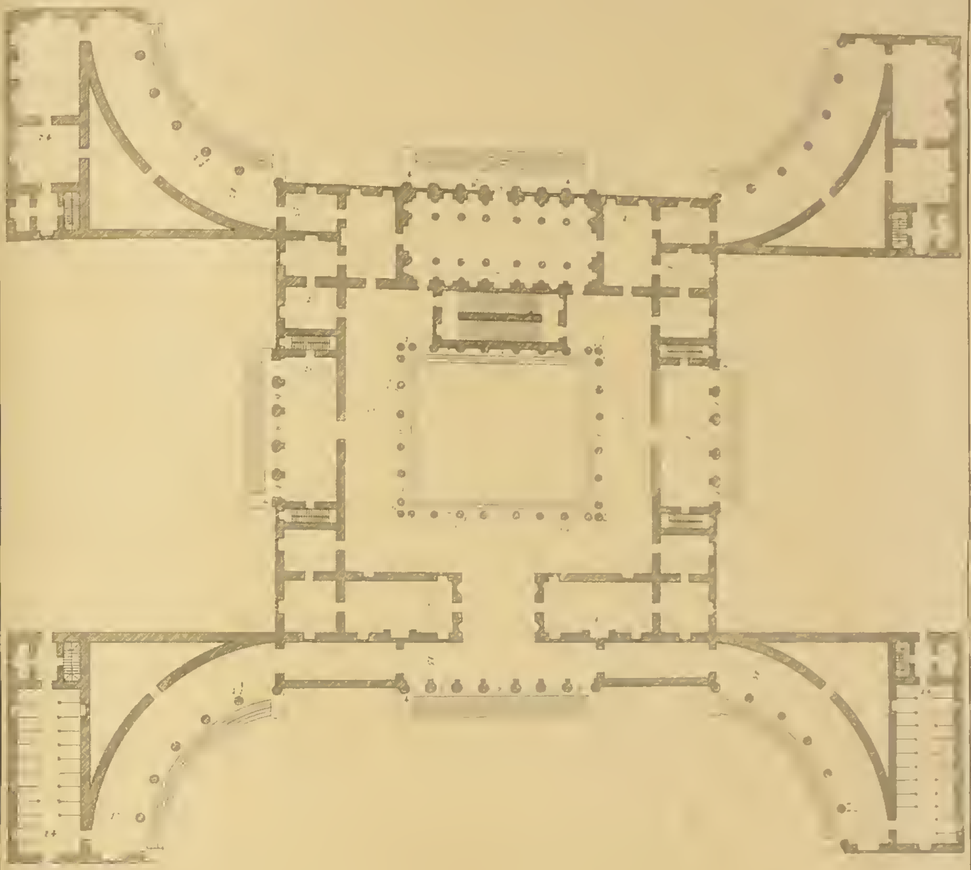
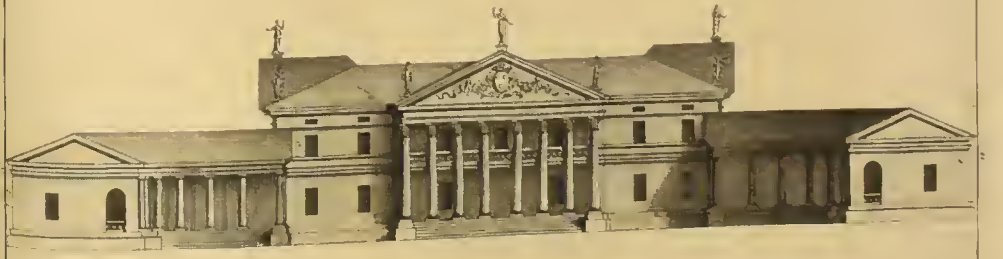
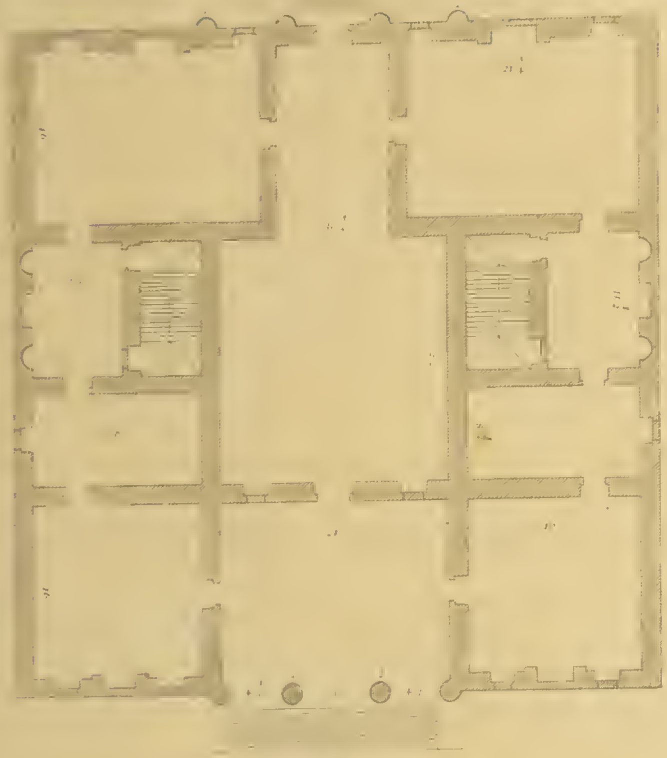
* *Plate* LX.

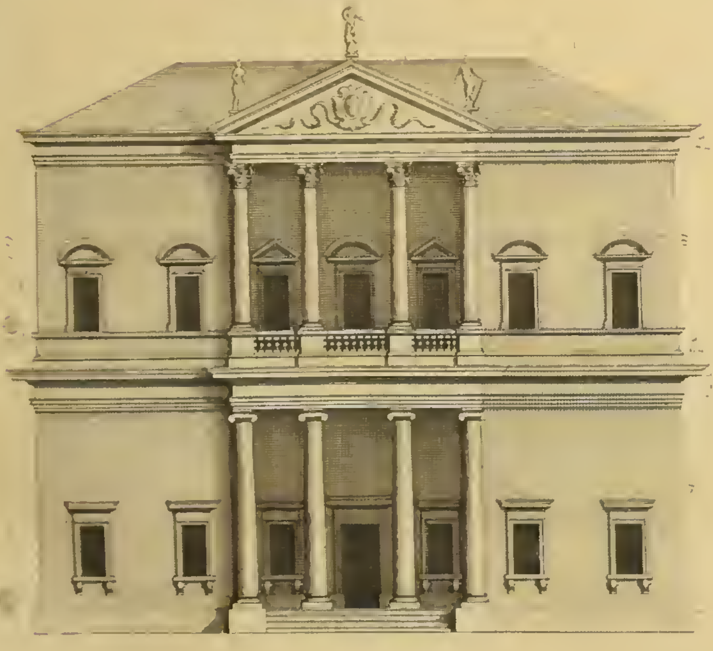
REMARK.

LX









REMARK.

*I know not the reaſon why this plate * was not inſerted by* Palladio, *in ſome part of his Book, among his other draughts of private Houſes, ſince it appears manifeſtly, that it comes from the ſame hand with all the reſt, and that 'tis probable it was not deſign'd for any other purpoſe; if it be not, perhaps, that the Graver did not finiſh it time enough for the Printer, as we have ſeen above, page* 62, *that the like has happen'd once before. But be this how it will, the draught deſerves a place here. Yet that it may be diſtinguiſh'd as adopted, or rather a poſthumous piece of this our Author, I have ſingulariz'd it by a different Character, and give it the laſt place, to avoid breaking in upon the order of the Book: beſides that this plate, with two others of the ſame Author, (which are the plan and elevation of the* Dorick *Temple, that I reſerve for the concluſion of this work) were found among the reſt, that were ſent from* Venice *to Mr.* de Chambray *at* Paris, *who firſt inſerted them in his* French *Tranſlation, from whence I took it.*

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* *Plate* LXI.

The end of the ſecond Book.

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